NONPOINT SOURCE BIENNIAL PROGRESS REPORT

July 2001 through June 2003

Prepared by:

State Water Resources Control Board

In cooperation with the

Nonpoint Source Interagency Coordinating Committee

May 2004

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

SECTION I
INTRODUCTION AND OVERVIEW
July 2001 through June 2003

A. Background

The State of California is committed to improve and protect the quality of the State's waters and their beneficial uses from potential adverse impacts of nonpoint source (NPS) discharges. Since the adoption of The *Plan for California's Nonpoint Source Pollution Control Program* (NPS Program Plan) in 1999, the State has continued to expand and refine its pollution control efforts and activities. The State's pollution control program remains focused on achieving, by the year 2013, implementation of the 61 management measures (MMs) identified in the NPS Program Plan. (See Appendix A of this report for a list and description of the MMs.) This is being accomplished through land-owner and resource manager implementation of NPS pollution controlling management practices (MPs) in six critical land use categories; agriculture, forestry, urban, marinas and recreational boating, hydromodification and wetlands. Implementation of the NPS Program Plan by the State Water Resources Control Board (SWRCB) the nine Regional Water Quality Control Boards (RWQCBs), the California Coastal Commission(CCC) and the participating NPS Interagency Coordinating Committee (IACC) was structured on development of three sequential five-year implementation plans, the first of which covered the years 1998 to 2003. The second five-year implementation plan, covering the years 2003 to 2008, was submitted to United States Environmental Protection Agency (USEPA) and National Oceanic and Atmospheric Administration (NOAA) in January 2004. This report summarizes the progress made during the prior five years of NPS Program implementation.

The SWRCB has released two prior biennial reports documenting and assessing the State's NPS pollution control implementation program. The first report, *Opportunity, Responsibility, Accountability*, released in January 2000 covered the two years prior to actual SWRCB adoption of the NPS Program Plan. It documented on-the-ground activities occurring throughout the State that were directed toward controlling NPS pollution. The second report, *Biennial Progress Report on California's Efforts to Prevent and Control Nonpoint Source Pollution, July 1, 1999 to June 30, 2001* (2001 Biennial Report), was released in April 2002. This report summarized the status of NPS Program activities of the SWRCB, the RWQCBs, and the CCC, the agencies with primary responsibility for managing the coastal and non-coastal programs to prevent and control NPS pollution.

Federal reporting requirements mandate that activities be reported on one-, two-, and five-year periods for the NPS Program. This biennial report is intended to satisfy all three of these reporting requirements which coincidentally ended in 2003. As such, all tabular summaries of NPS Program activities cover the longest of the required reporting periods – five years from 1998 to 2003.

B. Summary of Major Program Tasks

In developing the Program Plan in 1999, the SWRCB identified 19 'major program tasks' as the initial significant steps that needed to be taken for successful program implementation. These tasks had completion dates of 2003 or earlier, and are listed in Table I-A. The 2001 Biennial Report provided interim information on task progress or completion. Table I-A summarizes the most recent progress and status of these tasks, all of which have been completed at this time.

With completion of these tasks, new objectives and major program tasks for future years have been developed through the five-year planning process and are identified in the *State of California's NPS Five-Year Implementation Plan for 2003-2008* (NPS Implementation Plan 2003-08).

C. Report Format

This report is divided into sections that address the six NPS land use categories. These categories are for agriculture, forestry, urban, marinas and recreational boating, hydromodification, and wetlands. There is also one section entitled, 'All or Most Land Use Categories' (Section II) that summarizes the 'broad-scope' NPS pollution prevention projects that are not limited to an individual land use. Each section begins with a narrative discussion of significant category information, a perspective of the critical issues, and a discussion of anticipated actions for the next two-year period.

Each section also has an activity summary table with a listing and brief description of the projects undertaken by various State agencies. This information was provided by the individual agencies, and compiled and reported according to land use category and MM.

New activities and sources of information considered in the preparation of this report are as follows:

1. Participation from a greater diversity of State Agencies.

   This report was developed with greater participation from diverse State agencies. The 2001 Biennial Report, which was completed in April 2002, included progress information primarily from eleven agencies; the SWRCB, the RWQCBs and the CCC. This report, however, was prepared in cooperation with active participants in the IACC, which included a much greater representation of State agencies that have a stake in and responsibility for protecting California's waters and beneficial uses. A list of these participating agencies is provided in the Preface of this document.

   The IACC is a diverse and cooperative working group composed of 28 State agencies committed to implementing California's NPS Program Plan. The mission of the IACC is to:

   - Improve interagency coordination and promote statewide consistency in implementing the NPS Program Plan;
   - Promote a watershed approach in addressing NPS pollution; and
   - Provide a forum for resolving policy and programmatic conflicts among the State agencies

   For this report, IACC members began reporting on their activities in February of 2002, as a necessary first step to develop future program implementation plans. Ultimately, 26 agencies provided brief descriptions of the status of their particular activities, which are summarized and evaluated in this document. The IACC was also fully involved in the process of developing the NPS Five-Year Implementation Plan (2003-08), that was finalized in December 2003.

Table I-A. Evaluation of Major Tasks Identified in NPS Program Plan Executive Summary

Task Description	Agency	Progress Reported in 2001 Biennial Report	Progress for 2003 Biennial Report
By August 1, 2001 the SWRCB will provide Water Quality Assessment (WQA) data prepared pursuant to CWA sections 305(b) and 303(d) on the Internet for public reference and to help monitor and track the effectiveness of the NPS Program. The data, included on the Geographically-based Water Body System (GeoWBS) database, will identify water body size, degree to which beneficial uses are supported, affected beneficial uses, pollutants, and pollution sources.	SWRCB	The SWRCB has incorporated the information specified in the task description on the GeoWBS database prior to the August 1, 2001 deadline. The water quality information prepared pursuant to the requirements of the CWA sections 305(b) and 303(d) has been put on the Internet and is available for public reference.	The deadline was met. The Internet availability of CWA sections 305(b) and 303(d) continues.
By August 1, 2001, the State with the assistance of University of California, Davis Information Center for the Environment (UCD ICE) will complete development of a database that will enable State agencies to geographically track implementation of MMs and MPs	SWRCB	UCD ICE has completed development of two (2) database methods for tracking MMs and MPs. One method uses a global positioning system (GPS) integrated with a digital camera to locate MM/MPs and allows temporal tracking of their maintenance and operation. The other method summarizes spatial information on MM/MP implementation into a geographical information system (GIS) layer. Both methods are currently being field-tested.	Full utilization of this tracking of MM implementation through the use of photo documentation and GPS coordinates has been hampered by concerns regarding confidentiality from dischargers and other landowners. Furthermore, the database ultimately did not include all projects, which have been only voluntarily entered into Natural Resources Project Inventory (NRPI). This issue may be resolved in future years due to the two requirements that for grant-funded projects; the SWRCB and RWQCB staff must be allowed on site for implementation inspections, and sample results must be provided.
On even-numbered years or as required by the USEPA, the SWRCB will prepare the CWA section 303(d) and TMDL priority lists that will assist the State in targeting priorities by water body, geographic region, pollutant, etc.	SWRCB	The CWA section 303(d) list was last updated and adopted by the SWRCB in May 1998. No update was prepared in 2000 because the US EPA waived the requirement due to their revision of one provision of the TMDL regulations (40 CFR Part 130) for implementing CWA section 303(d). The next updated list is scheduled for adoption in 2002.	The new CWA section 303(d) and the TMDL Priority lists were revised and adopted by the SWRCB on February 4, 2003, and submitted to USEPA on February 28, 2003.

Table I-A. Evaluation of Major Tasks Identified in NPS Program Plan Executive Summary, con't.

Task Description	Agency	Progress Reported in 2001 Biennial Report	Progress for 2003 Biennial Report
By **December 31, 2000** the Critical Coastal Area (CCA) Committee will develop an initial list of CCAs where targeted implementation of MMs will occur.	CCC	The CCA Committee did not develop an initial list of CCAs by December 31, 2000. A strategy for completing this effort is currently under development by the CCC and will be available for review in the late summer of 2001.	The CCC has been successful in establishing a State CCA Committee, which has identified a list of 101 CCAs along the coast and within the San Francisco Bay. Four sets of information exchange forums began in June of 2003, and will continue through the summer of 2003.
By July 2000 and annually thereafter, the SWRCB, CCC and RWQCBs will prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	SWRCB, RWQCBs, and CCC	For FYs 1999-00 and 2000-01, the SWRCB and RWQCBs have prepared joint annual workplans for NPS activities funded through CWA section 319. The CCC has prepared annual NPS workplans for FYs 1999-2000 and 2000-01. Each workplan contained major tasks targeted in each FY for which the SWRCB, RWQCBs and CCC identified in the first five-year implementation plan.	Joint annual work plans for NPS activities funded through CWA section 319 were developed for FYs 2001-02 and 2002-03. Additionally, these agencies, as well as the IACC agencies prepared a Five-Year Implementation Plan for 2003-2008 NPS activities inclusive of 319(h) funded activities. This process is expected to be ongoing.
By **July 1, 2000**, the CCC will update its in-house Procedure Guidance Manual (PGM) to reflect newest development of NPS MMs and to provide guidance for updates and amendments to local coastal programs (LCPs) and development of new LCPs.	CCC	The CCC has updated its PGM, which is designed to assist planners in evaluating the potential of individual developments to impair water quality and to provide a centralized source of information regarding water quality protection policies and approaches to different categories of developments.	This task was completed with the third edition of PGM in 2000. In addition, starting in January 2002, staff began developing monthly NPS lessons. These ' Lesson o' the Month' or NPS fact sheets further CCC planners' understanding of water quality MPs. In June 2003, the CCC completed the draft Water Quality Guidance for Local Coastal Programs. This document presents model policy language and an array of land-use planning measures.

Table I-A. Evaluation of Major Tasks Identified in NPS Program Plan Executive Summary, con't.

Task Description	Agency	Progress Reported in 2001 Biennial Report	Progress for 2003 Biennial Report
Pursuant to the schedules listed in Appendix C of the NPS Program Plan, the RWQCBs will develop TMDLs.	SWRCB, RWQCBs	Appendix C of the NPS Program Plan was developed in 1999 using the best available data and information submitted by the RWQCBs. This information was included in the RWQCB' s 1998 303(d) TMDL priority lists and in the 1999 Watershed Management Initiative Integrated Plan. The TMDL schedules provided in Appendix C have been revised as a result of the RWQCBs experience in actual TMDL development.	The RWQCB's continue to develop TMDLs as appropriate.
By **January 31, 2000** the SWRCB and CCC will sign a Memorandum of Understanding (MOU) designed to enhance coordination between these agencies.	SWRCB, CCC	On February 2, 2000, the Secretary CalEPA, the Secretary of the Cal/RA, the Executive Director of the SWRCB, and the Executive Director of the CCC signed the MOU between their respective agencies and departments. All of the activities in the MOU that were required to be completed within the timeframe of this biennial report have been accomplished.	The MOU continues to be implemented through the efforts of water quality staff in the SWRCB, RWQCBs, and the CCC.
By **July 1, 2000** the SWRCB and CCC will convene the initial meeting of the Interagency Coordinating Committee (IACC). By September 30, 2000 the CCC and SWRCB will convene the initial meeting of the CCA Committee.	SWRCB, CCC	The deadlines specified for the initial meetings of the IACC and CCA Committee were met. The initial IACC meeting was held on June 7, 2000 at the SWRCB headquarters in Sacramento, and the initial meeting of the CCA Committee was held on September 20, 2000 at a CCC headquarters in San Francisco.	The deadlines were met by the year 2000, and the IACC and the CCA subcommittee, continue to hold active meetings at least four times per year.

Table I-A. Evaluation of Major Tasks Identified in NPS Program Plan Executive Summary, con't.

Task Description	Agency	Progress Reported in 2001 Biennial Report	Progress for 2003 Biennial Report
By **July 1, 2000**, the SWRCB and CCC will begin the process to update existing MOUs/MAAs and develop new MOUs/MAAs with other agencies as needed. By December 31, 2001, the SWRCB and CCC will prepare a schedule for completing any necessary remaining MOUs/MAAs.	SWRCB, CCC	The SWRCB began the process of reviewing and, as necessary updating, existing MOUs and MAAs prior to July 1, 2000. Agreements with the State Board of Forestry (BOF), Department of Forestry and Fire Protection (CDF), Department of Pesticide Regulation, Department of Food and Agriculture, and the Natural Resources Conservation Service have been evaluated. The SWRCB and CCC will prepare a schedule for completing any necessary remaining MOUS and MAAs by the December 31, 2001.	Work associated with the development of appropriate MOU' s has resulted in the following: (1) an MOU between the SWRCB and the CCC was signed in February, 2000; (2) a revision to the MOU between the BOF, CDF, the SWRCB, and the RWQCBs, was made in the spring of 2003; (3) a revision to the 1998 MOU between the SWRCB, RWQCB-2, and Bay Conservation and Development Commission (BCDC) was initiated, and (4) an MOU between the California Environmental Protection Agency (CalEPA) and the Resources Agency (RA) regarding Watershed Management Strategic Plan was signed in April 2003.
By **July 1999 and each year thereafter**, the SWRCB and RWQCBs will support activities using CWA section 319(h) funds to implement the NPS Program Plan MMs.	SWRCB, RWQCBs	Beginning with the July 1999-June 2000 (FY1999-2000) CWA Section 319(h) workplan, implementation of specific MMs consistent with the NPS Program Plan were identified for each SWRCB and RWQCB task and grant contract award.	NPS MMs continue to be incorporated into the Request for Proposals (RFP) and 319(h) grant selection process.
By **February 2001**, the SWRCB will develop guidance to be used by the SWRCB and RWQCBs in establishing the process by which the SWRCB and RWQCBs will enforce their authorities as outlined in the NPS Program Plan.	SWRCB	A draft *Compliance Assistance Guidance for Implementing the "Plan for California' s Nonpoint Source Pollution Control Program"* (CAG) was issued February 1, 2001. The CAG provided details on how NPS pollution control priorities are established and how NPS program implementation is related to RWQCB Basin Plans, TMDL development and implementation, MAAs, regulatory and non-regulatory actions, and funding.	The CAG has undergone considerable changes resulting from legislative amendments to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Now entitled, *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Implementation Policy) it provides: a review of the Porter-Cologne Act, including the administrative permitting authorities available to the SWRCB and RWQCBs; the history and background of the State's NPS pollution control program; the structure of the NPS implementation program including the mandatory five key elements of an NPS implementation program; and RWQCB compliance assurance, implementation success, and future considerations. The NPS Implementation Policy will be considered for approval by the SWRCB in February 2004.

Task Description	Agency	Progress Reported in 2001 Biennial Report	Progress for 2003 Biennial Report
By **July 1, 2002**, the State will prepare California MM implementation guidance. Links to existing guidance for implementation of MMs and MPs will be provided on the NPS Program website(s) in the interim (examples of existing guidance used in California include the NRCS technical guides and Storm Water Quality Task Force Manuals).	SWRCB	The SWRCB is preparing an RFP for development of the California' s MM Implementation Guidance. The RFP is expected to be released in September 2001 with the expected completion date by June 30, 2003. No electronic links to examples of existing guidance have been established.	The MM Implementation Guidance is being prepared by Tetratech, utilizing CWA 319 funds. The NPS Encyclopedia is expected to be completed early in 2004, and the MP Miner tool by mid-2004.
Pursuant to the schedules listed in Appendix C, the RWQCBs will begin implementation of total maximum daily load (TMDL) implementation plans.	SWRCB, RWQCBs	Appendix C of the NPS Program Plan was developed in 1999 using the best available data and information submitted by the RWQCBs. This information was included in the RWQCB' s 1998 303(d) TMDL priority lists and their respective chapters of the 1999 Watershed Management Initiative Integrated Plan. Since approval of the NPS Program Plan, the schedules provided in Appendix C have been revised as a result of the RWQCBs experience in actual TMDL development and implementation.	The RWQCBs continue to develop and implement TMDLs, as appropriate. A listing of the high priority TMDLs that will be addressed through 2004 are contained in the current CWA section 303(d) list released in 2003.
By **November 30, 2000**, the SWRCB will assess and report to the Legislature on the SWRCB' s and the RWQCBs' current surface water quality monitoring programs for the purpose of designing a proposal for a comprehensive surface water quality monitoring program for the State.	SWRCB	The SWRCB provided a Proposal for a Comprehensive Ambient Surface Water Quality Monitoring Program (SWAMP) to the State Legislature, as required, in November 2000.	The SWAMP has been developed and is currently in the process of preparing a strategy for identifying and reporting changes in water quality and beneficial uses that occur for all SWRCB and RWQCB Programs, including NPS

Table I-A. Evaluation of Major Tasks Identified in NPS Program Plan Executive Summary

Task Description	Agency	Progress Reported in 2001 biennial Report	Progress for 2003 Biennial Report
By **January 1, 2001**, the SWRCB will prepare and submit to the Legislature a report that proposes the implementation of a comprehensive program to monitor the quality of State coastal watersheds, bays, estuaries, and coastal waters and their marine resources for pollutants.	SWRCB	Pursuant to the requirements of CWC Section 13181, on January 1, 2001, the SWRCB submitted to the Legislature a proposal for the implementation of a comprehensive program to monitor the quality of the State' s coastal waters.	Task completed – see progress reported for 2001 Biennial Report.
By **August 1, 2000** and annually thereafter, the SWRCB will submit to the Legislature and make available to the public, copies of and a summary of information in all SWRCB and RWQCB reports that contain information related to NPS pollution and that the SWRCB or RWQCB are required to prepare in the previous fiscal year pursuant to CWA sections 303, ,305(b), and 319 and CZARA section 6217.	SWRCB	In January 2001, the SWRCB submitted to the Legislature and made available to the public the information related to NPS pollution that the SWRCB and the RWQCBs are required to prepare pursuant to CWA sections 303, 305(b), and 319, CZARA section 6217 for the period July 1, 1999 to June 30, 2000. The report for the period July 1, 2000 to June 30, 2001 is currently under review in the Governor' s Office.	The annual NPS Program reports to the Legislature consistent with this requirement have been submitted for years 2001, 2002, and 2003. This effort is expected to be ongoing.
By August 1, 2001 and August 1, 2003, the SWRCB and CCC will complete biennial reports, for evaluation by USEPA and NOAA as well as other agencies and the public, regarding the State' s progress in implementing the NPS Program.	SWRCB, RWQCBs, CCC	The 2001 Biennial Report fulfills the requirement for this task. It covers activities of the SWRCB, RWQCBs, and the CCC for FYs 1999-00 and 2000-01.	This report fulfills the requirement for this task and covers activities of the SWRCB, RWQCBs, the CCC and other IACC State agencies for FYs 2001-02 and 2002-03.

These agencies are now committed to the collaborative processes necessary to achieve the objectives of the second NPS Five-Year Implementation Plan (2003-2008).

2. Progress is based on a five-year period for some agencies, two years for others.

   Information on activities from the original eleven IACC agencies covers the period from 1998 to 2003. Some of the State agencies that joined the IACC in 2001 reported activities prior to participation in the IACC, while others did not. All agency activities devoted to NPS pollution prevention are included in this report, if they occurred between the years 1998 and 2003. Activity completeness was considered as a function of MM. The individual activities carried out by IACC members were scored for completeness. The scoring was sorted and tallied according to the MM the activity addressed.

   This scoring process is similar to one that was used in the 2001 Biennial Report for the "major tasks" identified in Table I-A. However, the tallies and comparisons with individual MMs are new. In the 2001 Biennial Report, the activities summarized by each agency were reviewed and 'scored' for completeness, marked by a grading system of checks, plus and minus signs. These symbols represented whether or not an activity could be said to have achieved ' satisfactory progress', 'unsatisfactory progress', or 'more than satisfactory'.

   This report uses a similar 'completeness scoring', without respect to relative value, or impact to water quality, or significance in its ability to protect beneficial uses. In this report, each activity was given a designation of 'Complete', 'Partially Complete', or 'Not Performed'. These scores were then tallied, and listed under the individual MM the activity was intended to address. This information is summarized Table I-B, as well as in each of the land use category sections that follow.

   This method of scoring the activities, while not the best solution for measuring completeness of MM implementation, at least provides some indication of the MMs that were addressed during the report period. The intent is to gather information that provides some understanding as to which MMs are currently being addressed and which are not.

   Recognizing that this method of evaluating program implementation is incomplete, the State is currently developing an improved process for tracking and evaluating MMs. Further, a NPS monitoring strategy is being developed to facilitate better understanding of the success and/or limitations of the NPS Program. These new tools, when completed, will provide a greater level of accountability and improved ability to assess performance. They will also provide information to better evaluate critical needs for NPS pollution prevention, and to focus future resources more effectively.

3. Activity completeness is compared to new objectives specified in the NPS Implementation Plan (2003-08).

   The activities in this report have been scored and tallied according to the new objectives specified NPS Implementation Plan (2003-08). From June through December 2002, the IACC devoted significant time to the collaborative process of developing objectives for the NPS Program for the years 2003-08. This process included the development of four key overall NPS objectives, as well

as objectives specific to each land-use category. The identification of objectives initiated the process for developing the second NPS Five-Year Implementation Plan (2003-08).

Table I-B. Activity Completion Status as a Function of MM

Management Measures	Completion Status			Total
	Complete	Partial	Not Performed	
1. Agriculture				
Activities addressing all Categories	56	40	20	116
Activities addressing all Agriculture MMs	7		2	9
A. Erosion and Sediment Control	26	18	10	54
B. Facility Wastewater and Runoff from Confined Animal Facilities	34	9	9	52
C. Nutrient Management	13	20	10	43
D. Pesticide management	24	11	4	39
E. Grazing Management	13	8	8	29
F. Irrigation Water Management	11	6	1	18
G. Education/Outreach	9	4	6	19
H. Used Oil Management	4			4
Agriculture Totals:	197	116	70	383
2. Forestry				
Activities addressing all Categories	56	40	20	116
Activities addressing all Forestry MMs	7	15	4	26
A. Preharvest Planning		6	1	7
B. Streamside Management Areas				0
C. Road Construction/Reconstruction				0
D. Road Management		2		2
E. Timber Harvesting	1	2		3
F. Site Preparation/Forest Regeneration		1		1
G. Fire Management		2		2
H. Revegetation of Disturbed Areas		2		2
I. Forest Chemical Management	1	1		2
J. Wetlands Forest				0
K. Postharvest Evaluation				0
L. Education/Outreach				0
Forestry Totals:	65	71	25	161
3. Urban Areas				
Activities addressing all Categories	56	40	20	116
Activities addressing all Urban MMs	12	9	4	25
3.1 Runoff from Developing Areas	1			1
A. Watershed Protection	1			1
B. Site Development	1		1	2
C. New Development	1			1
3.2 Runoff from Construction Sites				0
A. Construction Site Erosion and Sediment Control				0
B. Construction Site Chemical Control				0
3.3 Runoff from Existing Development	5	1		6
A. Existing Development	2	3		5
3.4 On-Site Disposal Systems	3			3

Table I-B. Activity Completion Status as a Function of MM (con't)

Management Measures	Completion Status			Total
	Complete	Partial	Not Performed	
A. New On-Site Disposal Systems	1	8	4	13
B. Operating On-Site Disposal Systems	5	1	3	9
3.5 Transportation Development (Roads, Highways, and Bridges	1			1
A. Planning, Siting, and Developing Roads and Highways		1		1
B. Bridges				0
C. Construction Projects				0
D. Chemical control				0
E. Operation and Maintenance				0
F. Road, Highway, and Bridge Runoff Systems	1		1	2
3.6 Education/Outreach		2		2
A. Pollution Prevention/Education: General Sources	31	6	2	39
Urban Totals:	121	71	35	227
4. Marinas and Recreational Boating				
Activities addressing all Categories	56	40	20	116
Activities addressing all Marinas MMs	4	9	3	16
4.1 Assessment, Siting and Design				
A. Marina Flushing			2	2
B. Habitat Assessment				0
C. Water Quality Assessment		7	1	8
D. Shoreline Stabilization				0
E. Storm Water Runoff				0
F. Fueling Station Design				0
G. Sewage Facilities	5	11	6	22
H. Waste Management Facilities	6			6
4.2 Operation and Maintenance				0
A. Solid Waste Control				0
B. Fish Waste Control	1			1
C. Liquid Material Control				0
D. Petroleum Control	2			2
E. Boat Cleaning and Maintenance	5	7	2	14
F. Maintenance of Sewage Facilities				0
G. Boat Operation				0
4.3 Education/Outreach	19	3	2	24
A. Public Education				0
Marinas Totals:	98	77	36	211
5. Hydromodification				
Activities addressing all Categories	56	40	20	116
Activities addressing all Hydromodification MMs	18	14	4	36
5.1 Channelization/Channel Modification				0
A. Physical and Chemical Characteristics of Surface Waters				0
B. Instream and Riparian Habitat Restoration				0
5.2 Dams				0

Table I-B. Activity Completion Status as a Function of MM (con't)

Management Measures	Completion Status			Total
	Complete	Partial	Not Performed	
A. Erosion and Sediment Control	1	3		4
B. Chemical and Pollutant Control				0
C Protection of Surface Water Quality and Instream and Riparian Habitat				0
5.3 Streambank and Shoreline Erosion				0
A. Eroding Streambanks and Shorelines				0
5.4 Education/Outreach				0
A. Educational Programs				0
Hydromodification Totals:	75	57	24	156
6. Wetlands, Riparian Areas and Vegetated Treatment Systems				
Activities addressing all Categories	56	40	20	116
Activities addressing all Wetlands MMs				0
A. Protection of Wetlands and Riparian Areas	7	10	3	20
B. Restoration of Wetlands and Riparian Areas	1		1	2
C. Vegetated Treatment Systems	1			1
D. Education/Outreach	3	4	2	9
Wetlands Totals:	68	54	26	148
1998-2003 Activity Totals:	624	446	216	1286

During the five-year implementation plan development process, it also was determined that the most efficient way to craft effective future implementation plan activities, was to have an understanding of the 'completeness' to which past activities addressed these same five-year plan objectives. For this reason, past activities were evaluated in terms of the objectives for the NPS Implementation Plan (2003-08). The exercise of comparing these past activities to the future objectives not only helped identify areas that were being addressed, but also pointed out the gaps in areas for which activities needed to be developed.

A summary of these activity scores as they relate to the four overall 2003-08 Implementation Plan Objectives is provided in Table I-C.

Table I-C. Activity Completion Status As Compared to 2003-2008 Objectives

Objectives	Completion Status			Totals
	Complete	Partial	Not-Performed	
Overall Five-Year Plan Objectives	Comprehensive Tally			
1. Promote the implementation of MMs and related practices by all levels of water quality managers.	219	147	71	437
2. Preserve water quality in water bodies that are currently meeting California water quality standards and protect them from future degradation from the impacts of NPS pollution	108	78	35	221
3. Promote the implementation of MMs and the use of MPs for the NPS component of TMDLs or in the 303(d) listed water bodies.	134	109	34	277
4. Promote better leverage of inter-agency and private entity resources ($, human, legal authorities) for the NPS Program.	127	87	45	259
Totals:	588	421	185	1,194

D. Summary and Next Steps

The State NPS Program has been successful in that it has completed the major program tasks (see Table I-A) to which it committed in the NPS Program Plan. However, it is clear that additional, focused efforts to reduce NPS pollution and to provide appropriate program performance measures remain significant challenges for future years. For this reason, the NPS Program continues to develop tasks that will help advance the NPS pollution prevention effort as indicated in the NPS Implementation Plan 2003-08. There are also significant efforts to improve the capability of assessing and reporting progress for the NPS Program, with particular focus on the effects of MM implementation on water quality. These efforts include the following:

1. Refinement of Implementation Plan Objectives and Performance Indicators.

   The absence of performance indicators for the NPS Program in the past has been recognized as a factor that needs to be addressed. The objectives specified in the NPS Implementation Plan (2003-08) were developed by the IACC with the intent of being able to use them to understand how successful the NPS Program is performing with respect to pollution prevention. These objectives will be re-evaluated and refined, and will be associated with specific performance indicators. These same indicators will be tied, whenever possible, to actual measures of increased protection or restoration of beneficial uses, and will be systematically evaluated with periodic progress reports.

2. Development of MM Tracking.

   The challenge of describing the State's effectiveness in MM implementation is recognized as being significant. Not only are there uncertainties in the definition of MM implementation, but the ability to track it throughout California is a tremendous challenge. The State is currently contracting with experts geared toward developing an approach to manage this difficult process as well as consulting with IACC partner agencies. Information gathering efforts will include coordination with the State/RWQCB TMDL and waiver programs. The goal is to provide the link between MM implementation and changes in water quality and restored beneficial uses.

3. Improve Understanding of Water Quality.

   The ability to describe improvements in water quality and protection of beneficial uses that can be attributed to NPS MM Implementation is recognized as one of the most significant challenges facing the NPS Program. For this reason, the State is committed to using CWA Section 319(h) funds to develop effective monitoring programs that can identify water quality status and trends as they relate to MM Implementation. This effort will be linked with the MM tracking, so that a more complete understanding of the program success or shortcomings can be evaluated. Data "mining" from existing local, State and federal programs and development of new monitoring approaches will be part of the process, as well as coordination through the NPS Monitoring Council.

The NPS Program and the IACC look forward to the development of performance measures that will provide improved understanding of the most effective actions that can be taken to prevent and control NPS pollution.

SECTION II
PROGRESS DISCUSSION
AGRICULTURE CATEGORY
July 2001-June 2003

A. INTRODUCTION

The NPS Program Agriculture Category addresses a variety of pollutants resulting from various agricultural activities. These pollutants typically include nutrients, animal waste, sediments, and pesticides. This section presents the NPS activities that focus on the impacts related to these agricultural pollutants, and cover activities conducted by the IACC agencies. The activities listed in the Agriculture Activity Summary define a broad spectrum of approaches to NPS pollution prevention, from coordination of volunteer programs, to program policy development, and to follow-up on violations and enforcement. These activities in the Summary Table are grouped according to the Agriculture MMs, which are listed in Table IIA, below.

During the 2002-03 period covered by this report, the IACC Agriculture Subcommittee added a new MM to the Agriculture Category to address the fact that certain oil recycling activities related to agricultural use were not being addressed under the above MM list. This new MM is now entitled, 'MM1H, Agricultural Used Oil and Waste Management.'

All activities related to the new Agriculture MM, as well as all IACC reported NPS Agriculture activities, are summarized in the Activity Summary Table of this section. In developing the summary, an effort was made to describe the completeness with which the activities were able to address specific MMs. Each activity was given a 'completeness score', and the scores then were tallied and correlated with the appropriate MM. The score tallies are provided in Table IIA below.

TABLE IIA
TALLY OF ACTIVITIES
ADDRESSING AGRICULTURE MMs

	Completion Status			Total
MANAGEMENT MEASURES	**Complete**	**Partial**	**Not Performed**	
1. Agriculture				
Activities Addressing All Categories	56	40	20	**116**
Activities addressing all Agriculture MMs	7		2	**9**
A. Erosion and Sediment Control	26	18	10	**54**
B. Facility Wastewater and Runoff from Confined Animal Facilities	34	9	9	**52**
C. Nutrient Management	13	20	10	**43**
D. Pesticide management	24	11	4	**39**
E. Grazing Management	13	8	8	**29**
F. Irrigation Water Management	11	6	1	**18**
G. Education/Outreach	9	4	6	**19**
H. Used Oil Management	4			**4**
Agriculture Totals:	**197**	**116**	**70**	**383**

In general, 193 out of 379 (or approximately 50%), of the listed activities were completed for the NPS Program. About 82% of the listed activities were either partially or completely accomplished. What these statistics tell us with respect to the completeness of MM implementation and the effect on beneficial uses and water quality remains undefined. Our inability to effectively determine the level of completeness of MM implementation is expected to be addressed through the MM Tracking Project, currently under development in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

B. AGRICULTURE CATEGORY OBJECTIVES

In June of 2002, the SWRCB and other IACC agencies began the process of establishing overall implementation plan objectives, as well as Category and MM objectives for the NPS Five-Year Plan covering 2003-2008. These objectives are intended to drive the development of activities designed to achieve the overall goals of the program. The approach to defining these objectives was also intended to encompass activities that IACC agencies have been conducting since 1998. The objectives are designed to be realistic and to reflect resource constraints. The new Agriculture Category Objectives are as follows:

1) More efficiently use existing resources by continuing to improve upon and expand current interagency coordination in order to more effectively manage agricultural pollution (including monitoring and enforcement mechanisms).

2) Develop information on the overall effectiveness of MP implementation on improving water quality.

3) Develop and implement TMDLs for waterbodies impaired by agricultural sources.

4) Continue to promote outreach and education and provide technical assistance to the agricultural community.

5) Continue to assess waterbodies, identify sources of NPS impacts from agricultural land, and increase the number of inspections of potential sources.

6) Develop watershed-based plans and target the implementation of management measures and practices to address impacts from agricultural land uses.

The activities that are listed in the Activity Summary Table of this section, and their scores, also have been correlated with the new Agriculture Category Objectives. The summation of these activities and their completion status is provided in Table IIB, below.

TABLE IIB
TALLY OF ACTIVITIES ADDRESSING
FUTURE AGRICULTURE CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
1. Agriculture	**Agriculture Activity Tallies**		
a) More efficiently use existing resources by continuing to improve upon and expand current interagency coordination in order to more effectively manage agricultural pollution (including monitoring and enforcement mechanisms).	41	18	17
b) Develop information on the overall effectiveness of MP implementation on improving water quality.	21	23	13
c) Develop and implement TMDLs for waterbodies impaired by agricultural sources.	5	16	0
d) Continue to promote outreach and education and provide technical assistance to the agricultural community.	32	8	5
e) Continue to assess waterbodies, identify sources of NPS impacts from agricultural land, and increase the number of inspections of potential sources.	28	9	3
f) Develop watershed-based plans and target the implementation of management measures and practice to address impacts from agriculture land uses.	41	14	18
Total:	**168**	**88**	**56**

C. ISSUES AND CHALLENGES

Efforts to improve water quality impaired by agriculture activities are highly challenging because of the different perspectives that exist between the regulatory community and the agricultural community. In spite of significant water quality deterioration and impairment, there continues to be a strong resistance among land users to accepting responsibility, and thereby administering appropriate MPs, that would ultimately remediate the water quality problems. Attempts to remedy the situation through regulatory channels are complicated by shrinking State budgets which impact inspections, oversight, and educational solutions. The budgetary restrictions impact local entities as well, thereby increasing the difficulty that willing landowners face in trying to protect beneficial uses.

D. AGRICULTURE ACTIVITY TOPICS FOR DISCUSSION

The activities that are discussed in this Section include the Central Valley RWQCB (RWQCB-5) Agriculture Waiver, the California Integrated Waste Management (CIWMB) Used Oil Program, TMDLs in the Colorado River Basin RWQCB (RWQCB-7), vineyard projects in the North Coast RWQCB (RWQCB-1), and activities in the Monterey Bay Marine Sanctuary.

1. Agriculture Waiver

One of the most significant recent changes in agriculture and water quality is issuance of the RWQCB-5's conditional waiver for irrigated agriculture. In 2003, the RWQCB-5 adopted a resolution establishing two conditional waivers of waste discharge requirements for effluents from irrigated lands (July 2003 Waivers). One waiver will apply to individual dischargers and

the other will facilitate the formation of watershed or "coalition groups" to aid dischargers in meeting waiver conditions. Conditions in the July 2003 Waivers will include water quality monitoring, and implementation and evaluation of MPs. These actions are the first step toward an eventual goal that will require discharger development of an irrigation management program that will protect and improve water quality so that pertinent water quality standards are met.

The RWQCB-5 also directed staff to start developing a longer-term program and to prepare a related Environmental Impact Report. The July 2003 Waivers will focus on building the capacity of local groups, engaging with individual dischargers, and starting the data collection process-- all of which will be part of the foundation for the longer term program.

2. Agricultural Used Oil Recycling Program

Growers in 21 California counties currently recycle thousands of gallons of used oil each month via agricultural used oil collection programs funded by the CIWMB. In Fiscal Year 2001-02, growers recycled 122,738 gallons of used oil through these programs. Seven additional counties are currently developing agricultural used oil collection programs. By recycling rather than stockpiling or improperly disposing of used oil, growers extend the life of this limited resource (which is re-refined into "good as new" lubricating oil) and keep it out of our waterways.

Agricultural used oil collection programs serve the collection needs of small acreage growers who generate less than 55 gallons of used oil per month. Most county programs consist of one or more permanent agricultural oil collection centers which are typically located at private oil distributors or county transfer stations. A collection center consists of a storage tank, pump, hose and siphon wand. Growers self-haul up to 55 gallons of used oil and pump it from their collection container(s) into the storage tank for free.

A few counties offer a mobile used oil collection service to resident growers in which a pump truck picks up used oil at the grower' s property by appointment. The CIWMB encourages growers who generate more than 55 gallons of used oil per month to register as industrial generators. Industrial generators contract with used oil haulers to collect their used oil and generators receive reimbursements of 16 cents per gallon of oil recycled, from the CIWMB.

This activity prompted development of the new Agriculture MM and is included as part of the 2003-2008 NPS Five-Year Plan. This new MM, "Agricultural Used Oil/Hazardous Waste Management" is the first MM to be added to the original 61 MMs of the NPS Program Plan.

3. Sediment TMDL Development and Implementation

In the past two years, the USEPA approved two Sediment TMDLs -- one for the Alamo River and the second for the New River. With respect to these TMDLs, the Colorado River Basin RWQCB (RWQCB-7) staff have been involved in the following activities:

- Managed several grant contracts focusing on monitoring and research activities in support of implementation of these TMDLs; and,
- Implemented and evaluated MPs that support sediment load reductions.

- Development of TMDL implementation QAPPs and conducting monthly sediment monitoring activities. Since February 2003, Regional Board staff have been conducting monthly Sediment TMDL implementation monitoring for both the Alamo and New Rivers at eleven locations;
- Execution of a contract with the University of Redlands to develop a GIS based system to assist staff in TMDL and Implementation (planning and tracking), Basin Planning, Border Coordination. A report entitled "GIS Initiative; Needs Assessment and Requirements Analysis" was developed;
- Mailing informational letters to about 4000 water account holders in the Imperial Valley. The purpose of the letters was to inform all Imperial Valley farmers and growers on the TMDL requirements and deadlines.

One of the results of the RWQCB-7 TMDL efforts was the cooperative process with the Imperial County Farm Bureau (ICFB). ICFB began providing information to farmers about water quality issues associated with irrigated fields, and continues to assist farmers in their efforts to comply with the TMDL requirements. The ICFB has increased awareness of TMDLs and MPs through articles published in local and statewide newspapers, agricultural newsletters, and through placing seven billboards in high farmer traffic areas of the Imperial Valley. The billboards informed farmers of the September 1, 2003 deadline to submit Farm Water Quality Management Plans (FWQMP) in order to comply with TMDL requirements. Five Drainshed Meetings were held in May 2003 at various locations around the Imperial Valley to inform farmers about TMDLs. In addition, three meetings will be conducted in Spanish for irrigators during the month of July 2003.

The ICFB has also developed a website where farmers may learn about TMDL regulations and upcoming outreach meetings, sign on to the program (which is mandatory), and electronically submit their FWQMPs. Once the plans are submitted, the RWQCB-7 will verify that appropriate dischargers have submitted plans through field monitoring and inspections. Enforcement actions will take place against dischargers who have not submitted a plan. Water quality monitoring will take place to ensure that water quality targets are being met. FWQMPs will be updated annually. Other contracts with the University of California Cooperative Extension (UCCE) and Imperial Irrigation District (IID) evaluate the applicability and effectiveness of different irrigation management strategies and fibermats in reducing tailwater and erosion in Imperial Valley. One way tailwater reductions can be achieved is through reduced water usage. Preliminary reports are showing that growers can reduce water usage by approximately 16% and still maintain a maximum yield. The final report from these projects is available in December of 2003.

4. North Coast Vineyard Projects

The RWQCB-1 has two activities that help improve land use practices in the ever-expanding vineyards of the North Coast. These are the Fish Friendly Farming (FFF) and the Hillside Vineyard Erosion Control Programs.

a. Fish Friendly Farming

The wine country of Northern California is best known for its outstanding wines; what is less well known is that it is also home to diverse wildlife including endangered salmon and steelhead trout. What vitners are learning is that vineyards, if properly managed, can support and sustain these endangered species.

The FFF Program provides detailed technical assistance to farmers to complete a farm conservation plan for their entire property. The FFF Workbook of Beneficial Management Practices (BMPs) provides farmers the preferred methods to conserve soil and water, enhance water quality and wildlife habitats, and protect agricultural and environmental resources. The BMPs are applied to each property. Program representatives from one or more of the three participating agencies -- the RWQCB-1, Department of Fish and Game (DFG), and National Marine Fisheries Service (NMFS) -- perform site visits and make recommendations regarding which MPs seem to be most appropriate. In most cases, consultation is addressed with the landowner and the program's consultant. When the solution is more complicated, the FFF Program's three participating regulatory agencies perform an advisory role in the consultation process.

Changes in ranch management practices, road and erosion site repair projects, creek and river restoration projects, and other improvements are identified, and an implementation timeline developed. On most farms, the farmer implements most of the needed changes and improvements. In some cases, where environmental restoration of creeks is needed, the farmer receives both technical and financial assistance through State and federal grant programs.

Three agencies review farmers' ranch management plans: NMFS, the RWQCB, and DFG. These agencies review the plans and properties in detail and, if appropriate, issue a letter of recognition acknowledging the farmers' efforts to follow the strict requirements of the FFF Program. To date, the three agencies have officially recognized vineyard properties totaling over 10,000 acres in Mendocino and Sonoma Counties.

Currently, the program continues to address mainly existing vineyards and the surrounding property. The incentive for landowners and managers to participate in this program is to get a jump start on complying with the TMDL process. Additionally, in the long run, participating in this program gives landowners and managers added protection from storm related erosion damage. This program promotes sustainable practices that benefit landowners and the environment simultaneously.

b. Hillside Vineyard Erosion Control

The conversion of rangeland and forest land to vineyards continues to occur throughout California. In the north coast, there is significant interest among agriculture and environmental groups to improve education and water quality protection oversight on vineyard development and management. Public complaints to the RWQCB-1 regarding vineyard erosion and pesticide water quality issues have rapidly increased as the grape industry grows. At present, the RWQCB-1 has assigned 1.5 staff to the role of coordinating education and outreach to grape growers, as well as to conducting vineyard inspection and enforcement activities. Staff also

implemented vineyard pesticide monitoring, contingent upon securing NPS or other funds for laboratory analyses.

The outcome of this effort will be improved vineyard development and management practice implementation, which will result in less erosion or sedimentation, improved riparian function, improved fish habitat, and improved pesticide use near water. As for enforcement actions, Sonoma County has a Vineyard Erosion Control Ordinance that they are strictly enforcing. The County performs site visits and in some cases RWQCB-1 staff participate in these site visits.

5. Implementation of the Monterey Bay National Marine Sanctuary's (MBNMS) Plan

The Central Coast RWQCB (RWQCB-3) is currently working closely with agriculture in the central coast to address water quality issues through implementation of the MBNMS Plan for Agriculture. Key partners in this broadly supported effort include (but are not limited to) the Coalition of Central Coast County Farm Bureaus (representing the six county Farm Bureaus surrounding the Sanctuary), USDA Natural Resources Conservation Service (NRCD), Resource Conservation Districts (RCDs), UCCE and the RWQCB-3. Several researchers from University of California (UC), California State University (CSU) Monterey Bay, and Moss Landing Marine Labs are conducting research and collecting water quality data in conjunction with MM implementation. Numerous other State and federal agencies support this plan, as well as local, state and federal government officials.

Implementation of this plan has been an exemplary effort that exhibits the potential for successful cooperative effort with agriculture in California.

The MBNMS organized several plans to reduce pollution into Monterey Bay. A comprehensive Agricultural and Rural Lands Plan was developed in 1999 and is now being implemented. The Plan encompasses a number of key elements, including:

- A commitment by the Coalition of County Farm Bureaus to organize agricultural producers into watershed working groups. Each of the six counties that drain into the Sanctuary has a Farm Bureau coordinator. The coordinator requests a farm water quality class (see below), helps growers finish farm water quality plans, organizes future meetings that discuss implementing practices, and submits to the Regional Board a yearly written report that tracks management practice implementation;
- UCCE continues to teach a 15-hour, Farm Water Quality Planning Short Course right after farm group formation. During the course, each grower creates a farm water quality protection plan;
- Water quality monitoring for the working groups commences after the short course. RWQCB-3 has established a Technical Advisory Committee (TAC) to oversee development of the two monitoring programs; water quality monitoring and management practice tracking;
- After attending the class, the Farm Bureau coordinators continue to organize grower meetings. The NRCS, RCD's, UCCE and others provide technical assistance in implementing management practices.

Key progress to date includes:

- The formation of 16 Watershed Working Groups which are actively developing Farm Water Quality Plans. An additional 19 groups are in the process of being formed.
- Over 90 farmers have attended the Farm Water Quality Course, half of these have developed comprehensive water quality plans for more than 10, 700 acres of irrigated crops
- Over 35 workshops have been conducted to train farmers in specific conservation practices. Over 750 farmers have attended these workshops.
- Two years of water quality monitoring data for the first watershed group formed. (What does the data show?)
- The hiring of four staff for the NRCD , five staff for the Coalition of County Farm Bureaus the RCDs and the UCCE to implement the MBNMS Agricultural Plan.

E. NEXT STEPS

The Five-Year Plan for Agriculture has resulted in steps for organization and implementation, and it is anticipated that the Agriculture Subcommittee of the IACC will play an active role in implementation of the Agriculture Five-Year Plan Objectives and coordination of the activities. Continuation of the many collaborative efforts, such as the RWQCB-5 waiver for Irrigated lands, and the interagency effort of the IACC will improve the chances for improved relations and greater water quality protection. Other activities that will be key to the ability of the NPS Program to evaluate it's effectiveness in agriculture, rest with the development of water quality monitoring for NPS and MM tracking that expands upon the information currently available through RWQCB activities. Important progress also is being made in getting commitments from a broader spectrum of the agricultural community to participate with the IACC for the purposes of improving water quality and protecting beneficial uses.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Agriculture

Management Measure 1A Erosion and Sediment Control

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1366	Through inspections and published reports identify topics to include in program.	DPR	Inspection Reports and copies of found information provided and topics identified.		With no augmentation or special funding this process will continue as collateral.
Assess 714	Incorporate Citizen Volunteer Monitoring Program on reference conditions.	RWQCB2	The following action relates to watershed assessment for sediment TMDL in the Napa River Watershed: Limiting factors assessment for Napa River watershed first phase completed, report prepared, entitled: Napa River Basin Limiting Factors Analysis, Completed June 2002.		Ongoing work with citizen volunteers throughout Napa River watershed.
Assess 713	Develop preliminary reference model.	RWQCB2	The following action relates to watershed assessment for sediment TMDL in the Napa River Watershed: Limiting factors assessment for Napa River watershed first phase completed, report prepared, entitled: Napa River Basin Limiting Factors Analysis, Completed June 2002.		Second phase of assessment proposed, dependent upon available funding.
Assess 711	Compile existing monitoring data.	RWQCB2	The following action relates to watershed assessment for sediment TMDL in the Napa River Watershed: Limiting factors assessment for Napa River watershed first phase completed, report prepared, entitled: Napa River Basin Limiting Factors Analysis, Completed June 2002.		Continue monitoring and sanitary survey updates.
Assess 712	Analyze instream conditions.	RWQCB2	The following action relates to watershed assessment for sediment TMDL in the Napa River Watershed: Limiting factors assessment for Napa River watershed first phase completed, report prepared, entitled: Napa River Basin Limiting Factors Analysis, Completed June 2002.		Continue monitoring and sanitary survey updates.

Assess 718	Perform a watershed assessment of the Salton Sea Transboundary Watershed.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.	None.	Activity Completed.
Assess 716	Implement water quality monitoring activities in the Salton Watershed for the Alamo and New Rivers and the Imperial Valley Agricultural Drains. Coordinate monitoring activities with input from the Salton Sea Water Quality.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003. Additionally, Regional Board staff are conducting monthly and quarterly monitoring activities for the development and implementation of TMDLs in the watershed.	None.	Activity Completed.
Assess 719	State Coastal Conservancy (SCC) develops measures to control erosion and reduce sedimentation of coastal wetlands and riparian areas, including impacts resulting from agricultural practices; SCC funds projects which improve best practices to achieve environmentally sustainable operations; SCC develops demonstration projects to evaluate alternative methods and measures.	SCC	Funding erosion and sediment control plans in target watersheds, including north and central coast coastal watersheds involving 'impaired waterbodies,' including Tomales Bay, Humboldt Bay, rural San Mateo coast, and Santa Cruz coastal watersheds.	Permitting and Approval Processes; Project Partner Capabilities.	Initiate implementation of project feasibility, planning and design tasks; complete project assessments; fund demonstration project using Proposition 40 funding.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 1369	Coordinate actions with State and local regulatory agencies and stakeholders on DPR lands.	DPR	Lack of resources and funding prevented coordinated effort.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	
Coordinate 738	Work with stakeholders to develop watershed management plans to address sedimentation and erosion from agricultural areas.	RWQCB2	Tomales Bay Watershed Council plan, Santa Clara Basin Watershed Management Initiative, and others.		RWQCB staff will continue to work with stakeholder groups in developing Watershed plans.
Coordinate 739	Coordinate Adaptive Management Committee for implementation of sediment TMDLs for the Alamo and New Rivers and the Imperial Valley Agricultural Drains.	RWQCB7	On-going. Formal implementation of the Sediment TMDLs will not start until October 2003. Implementation monitoring activities by Regional Board staff are on-going. The Adaptive Management Committee is not formed yet.		This activity will be part of implementing the Sediment TMDLs.
Plan 1368	Determine Best Management Practices (BMP) for reducing and controlling agricultural erosions and sediment in units of the SPS.	DPR	Agricultural erosion and sediment surveys in units of the SPS were conducted by state and regional boards.		
Plan 726	Develop TMDLs for Clean Water Act (CWA) §303(d) listed waters.	RWQCB2	Preliminary TMDL reports for Napa and Sonoma Watersheds in Progress. Preliminary report for the San Francisquito Watershed in Progress.		Continue current activities.
Plan 724	Direct grant funds and cost sharing opportunities to projects that implement Management Practices (MPs).	RWQCB3	Grant funding was provided which allowed for project implementation. Several projects which implemented over 50 practices in Salinas Valley were funded by grants.		Continue using grant funds for Management Practice implementation. Continue seeking grant funding for implementation.
Plan 733	Draft implementation control strategies.	RWQCB4	Use was made of general guidelines, TMDLs, and SN partnerships to implement strategies.	Clear enforcement policy and TMDL delays have not provided necessary "hammer" for broad implementation.	Formalize implementation policy with other MPs, e.g. Nutrient MPs, into Coordinated Resource Management Practices (CRMPs). Adopt plans by Agricultural WQCP drafted by UC co-operative.

Plan 730	Work with stakeholders to develop watershed management plan (includes erosion control element).	RWQCB5	319h project in the westside tributaries of the Sacramento River. Local watershed program established for Reeds and Redbank Creeks.	
Plan 728	Develop TMDLs for Clean Water Act (CWA) §303(d) listed waters.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.	Continue with TMDL development.
Plan 735	Develop Subwatershed Plans and individual farm Water Quality Management Plans.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.	Continue current activities.
Plan 734	Incorporate sediment control BMPs in Basin Plan.	RWQCB7	Completed. The Alamo River Sediment TMDL which included a list of sediment control BMPs was incorporated into the 2002 Regional Board' s Basin Plan.	Activity completed.
Plan 725	Direct grant funds and cost sharing opportunities to projects that implement management practices (MPs).	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.	Continue current activities.

Plan 736	Coordinate with growers to quantify sediment control BMP performance.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.		Continue current activities.
Plan 1331	Develop TMDLs for Clean Water Act (CWA) §303(d) listed waters.	RWQCB8	Nutrient, Sediment, and Fecal TMDLs are adopted and being implemented. Fecal TMDL is going as scheduled. The toxics TMDL has not yet been adopted. The sediment TMDL is on schedule. Behind schedule tasks include revision of permits to incorporate load allocations from the nutrient TMDL. Permits are in the revision process. There is a review of water quality objectives in San Diego Creek in progress. Initiated development of CB Watershed Pathogen TMDLs in August 2001. Monitoring Program developed and initiated. Geographic Areas include the Lower Salinas River, Lower Pajaro River, Morro Bay Watershed, Salton Sea Transboundary Watershed, Newport Bay Watershed, Big Bear Lake Watershed, San Jacinto, and Chino Basin. Adopted TMDL according to an established schedule and implemented practices per the TMDL. The Task is from 1998 through 2002.	There are two general tasks where we have fallen behind the schedule established in the nutrient TMDL. One area is the the revision of permits to incorporate load allocations from the nutrient TMDL. Some of these permits have been revised, others are in the process of being revised. Lack of adequate staff resources are the main reason for the delay along with the need to evaluate additional monitoring data that the dischargers have been required to collect. Another area where the nutrient TMDL is behind schedule is the review of water quality objectives in San Diego Creek. The task is taking longer than anticipated due to the need for collecting and analyzing new data.	Nutrient TMDL Adoption anticipated by RWQCB8 in Jan 2004. Nutrient TMDL Adoption anticipated by USEPA by Jan 2005.
Plan 737	SCC funds the preparation of Resource Enhancement Plans	SCC	Priority enhancement projects targeting CWA §303(d) listed coastal watersheds impacting coastal wetlands and riparian habitats.	Funding and Project Staffing; Project Partner Capabilities.	Continue to develop project plans using Proposition 40 funds.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 731	Develop Management Agency Agreement and Water Quality Management Plan with Bureau of Land Management.	SWRCB	Ongoing development of a WQMP/MAA plan that is to be submitted for State Review. Review is to be expanded upon.		Continue plan report development.
Target 1367	In SPS units where NPS pollution is not in compliance with water quality standards, determine and prescribe appropriate MPs.	DPR	This activity was not completed due to lack of resources and funding.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	
Target 720	Prioritize water segments by regional watershed list, total maximum daily loads (TMDLs), and potential impact reduction	RWQCB4	Implementation derived from TMDL implementation plans and TMDL schedule.		Further refinement is ongoing and case specific implementation is underway for complaints.
Target 722	SCC projects located in areas of coastal agriculture adjacent to sensitive wetland and riparian resources.	SCC	Proposition 12 funding targeting areas of coastal agriculture adjacent to coastal wetlands/riparian sensitive resources, including Monterey Bay/Elkhorn Slough, Oxnard Plain, Santa Maria Valley.	Funding and Project Staffing.	Target Proposition 40 funds.
Implement 762	Napa and Sonoma hillside vineyard erosion control project: apply mulch derived from yard trimmings on hillside vineyards in the winter of 2000 and monitor erosion after each major storm event until May 2001. Mulch used within vine rows and cover crops between rows to control erosion.	CIWMB	Mulch Demonstration Project: Napa and Sonoma County Utilization of Composted Mulch for Erosion Control in Hillside Vinyards. Pub. No. 442-02-009.	No funding for future agriculture projects.	
Implement 763	Upper Valley hillside vineyard erosion control projects: apply mulch derived from yard trimmings on hillside vineyards in the winter of 2000 and monitor erosion after each major storm event until May 2001. Mulch used between vine rows crops to reduce erosion.	CIWMB	Mulch Demonstration Project: Napa County: The Effect of Given material Mulches on Erosion and Dissolved Organic Nutrient Loss From Recently Disturbed Hillside Vinyard Soils; Pub. No. 442-02-013.	No funding for future agriculture projects.	

Implement 765	Disseminate information on use of urban-derived compost and mulch for erosion control at trade shows, Resource Conservation Districts meetings, conferences, etc.	CIWMB	Educational materials distributed at various events	Lack of funding to attend events.	
Implement 761	Use mulch in citrus orchards for erosion control and reduction in NPS pollution in the Calleguas Creek Watershed.	CIWMB	Mulch Demonstration Project in Napa County: "The Effect of Given material Mulches on Erosion and Dissolved Organic Nutrient Loss From Recently Disturbed Hillside Vinyard Soils"; Pub. No. 442-02-013. Also the publication, "Stop Runaway Soil--Use Mulch! An Erosion Control Guide for Citrus Growers" (443-99-021).	No funding for future agriculture projects.	
Implement 741	Promote hillside vineyard MPs to reduce erosion and sedimentation; to improve riparian function and fish habitat.	RWQCB1	Reviewed all new vineyards; responded to all vineyard-related complaints; participated in local and statewide vineyard-related guidance and regulatory efforts.	None at present.	
Implement 754	Implement model, interagency streamlined permit process piloted in Elkhorn Slough in other watersheds Statewide.	RWQCB2	Work with Marin Resource Conservation District and Sustainable Conservation to develop streamlined permit process for West Marin County. Process set up with agencies, permitting strategy developed, waiting for application.	Delays by applicants in developing process and submitting general permit application. CEQA issues.	
Implement 740	Conduct sediment budgets; Perform historical and existing land use and habitat analysis; Develop and calibrate erosion control model to evaluate land uses and BMP effectiveness, with emphasis on vineyards; Develop hydrologic budget; Establish linkages between BMPs, sediment production and delivery and effects on habitat or beneficial uses.	RWQCB2	Sediment budget, habitat analysis, and linkages between BMPs, sediment, and habitat are being addressed through Phase II of Napa sediment TMDL study.	Hydrologic budget not being done due to budget constraints. Erosion control predictive model may be addressed through phase II study but not yet determined.	Study expected to be completed by September 2004.
Implement 744	Implement sediment and nutrient reduction projects and riparian restoration activities.	RWQCB2	319 (h) and Prop 13 grants to Resource Conservation Districts, projects implemented.		Ongoing grant management; Upcoming Prop 13 grants.

Implement 743	Assist in developing local Watershed Monitoring Center.	RWQCB2	East Bay Watershed Center set up at Merritt College. Ongoing work with WARC (Watershed Assistance Resource Center) and EBWC (East Bay Watershed Center) to implement trainings and community assistance.		Continue ongoing projects with WARC and EBWC.
Implement 755	Implement model, interagency streamlined permit process piloted in Elkhorn Slough in other watersheds Statewide.	RWQCB3	A Streamlined permit process was completed for Monterey County.	Insufficient agency staff time to fully participate.	Technical assistance will need to be provided.
Implement 756	Implement model, interagency streamlined permit process piloted in Elkhorn Slough in other watersheds Statewide.	RWQCB4	Calleguas Creek phase II 319 projects scheduled to develop streamlined permitting process.		Provide model to Regional Board 4 contractor for further implementation. Investigate and analyze applicability of adapting model to Region 4.
Implement 748	Implement BMPs for flood and sediment control.	RWQCB5	20 orchards participated in program, occuring in the Colusa Basin Drain Sub-Watershed Project: Sand and Salt Creek Watershed 319h contract #5-081-255-0.		
Implement 749	Implement MMs/MPs to reduce sedimentation, includes revegetation, fencing, alternate water supply, and tailwater return systems.	RWQCB5	MPs installed and monitored in the Panoche and Silver Creeks, with no photos. Monitoring indicates successful installation. Contract #0-052-255-0 with Westside Resource Conservation District.		
Implement 750	Provide technical assistance in the implementation of best management practice (BMP) demonstration projects implemented pursuant to the Imperial CFB NPS Initiative.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.		Continue current activities.

Implement 751	Implement Subwatershed Plans and individual farm WQMPs.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.		Continue current activities.
Implement 752	Implement BMPs in accordance with Subwatershed Plan time schedules.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.		This activity will be part of implementing the Sediment TMDLs.
Implement 758	Implement model, interagency streamlined permit process piloted in Elkhorn Slough in other watersheds Statewide.	RWQCB7	No progress.	Limited resources.	Activity could be conducted if resources become available.
Implement 760	Implement model, interagency streamlined permit process piloted in Elkhorn Slough in other watersheds Statewide.	RWQCB9	Not done.	Limited staff and funding.	None.
Track and Monitor 774	Document progress achieved with watershed grants and Resource Conservation District support grants.	DOC	During first 2-year period of the watershed coordinator program, coordinators obtained over $13 million in additional watershed funding and more than 320 new partnerships were formed. The Resource Conservation District Assistance Grant Program resulted in over 50 grants being awarded over seven years. Grant projects ranged from assisting with the purchase of office equipment to establishing fire breaks and fuel reduction zones.	Legislative funding for co-ordinator program sunset on 6/30/2002 - not renewed. Funding for Resource Conservation District Assistance Grant program not in governor' s proposed budget for FY 03-04.	Continue ongoing activities.

Track and Monitor 771	Track and monitor MMs implemented.	RWQCB4	Initiated coordination to identify MMs that are being implemented.	Agricultural Oversight Committee is best vehicle for this activity but group is still at formidable stage, and has still not formed.	Identify MMs, cooperators, and set up monitoring system.
Track and Monitor 772	Monitor BMP implementation through on-the-ground tracking and through cooperative reporting.	RWQCB7	Two sediment TMDLs were developed and approved; one for the Alamo River and the second for the New River. An Imperial Valley Agricultural Drains Sediment TMDL is being developed. The Imperial County Farm Bureau was awarded two §319(h) grants to work with the Imperial Valley farmers and growers on implementing the Sediment TMDLs and developing plans and a database for reporting. All plans are due to the Regional Board by October 2003.		Continue current activities.
Track and Monitor 773	Track monitoring programs specified in the sediment TMDL implementation plan.	RWQCB8	The Newport Bay/San Diego Creek TMDL implementation report was adopted in 4/99, and is being implemented for sediment control, acting as an addendum to the CWA §303(d) listed sediment measures.	None.	Continue ongoing activities.
Track and Monitor 775	SCC Enhancement Plans require Management Plan (5 yr.-20 yr.) be prepared.	SCC	Preparing watershed enhancement plans with adaptive MMs in target watersheds.	Project staffing.	Continue to track and monitor project progress and project effectiveness.
Track and Monitor 770	Monitor long-term sediment management strategies.	SWRCB			
Report 1382	Report to CCC annually the determination of MPs, implementation plans, coordination with other agencies and stakeholders, and actions taken to control or reduce NPS pollution.	DPR	No reporting took place due to lack of funding and labor.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	

Report 776	Summarize erosion and sediment control task.	RWQCB4	Completed as part of the Non-Point Source Semi-annual Report.	Inter-relationships between all facets of Agriculture make it difficult to isolate sediment runoff from other Agriculture pollutants. Limited resources available.	Include draft information on web page.
Report 777	Prepare and distribute biennial NPS Implementation Progress Reports for the Salton Sea Transboundary Watershed.	RWQCB7	Formal implementation of the Sediment TMDLs will not start until October 2003. Regional Board staff is conducting sediment monitoring activities pursuent to the sediment TMDLs implementation plans. The first annual sediment implementation progress report will not be available until early 2004.		This activity will be part of implementing the Sediment TMDLs

Management Measure 1B Facility Wastewater and Runoff from Confined Animal Facilities

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1383	Conduct surveys and assessment of SPS units where facility wastewater and runoff from confined animal facilities are associated with agriculture.	DPR	Lack of time and resources prevented activity completion.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	
Assess 780	Evaluate the current Confined Animal Feeding Operations (CAFO) programs being implemented at the regional level.	RWQCB1	Reviewed various cow and goat dairy operations. Responded to various complaints related discharges from horse pastures.	Insufficient resources.	Continue ongoing activities.
Assess 783	Evaluate the current Confined Animal Feeding Operations (CAFO) programs being implemented at the regional level.	RWQCB4	Regulatory control is mandated only for CAFOs and facilities that receive complaints.		Clarification of regulatory controls.
Assess 785	Evaluate the current Confined Animal Feeding Operations (CAFO) programs being implemented at the regional level.	RWQCB6	Completed inspections responded to complaints reviewed, reports of waste discharge and completed enforcement actions.		Continue with ongoing activities.

Assess 786	Evaluate the current confined animal feeding operations (CAFO) programs being implemented at the regional level.	RWQCB7	A general permit for concentrated animal feeding operations (CAFOs) facilities in the region was adopted in 2001.		None. Activity Completed.
Assess 1329	Conduct surface and ground water quality monitoring to assess current and historic dairy waste impacts.	RWQCB8	Surface Water in Chino Basin Watershed monitored as part of TMDLs and other studies. Groundwater in Chino Basin watershed monitored as part of 205j grant project and stakeholder studies. Database under development. The Geographic Area includes Chino Basin, Lake Elsinore and San Jacinto Watersheds. Performance Measure is based on the Database and the project lasted from 1998-2001.	None.	Database development.
Assess 788	Evaluate the current Confined Animal Feeding Operations (CAFO) programs being implemented at the regional level.	RWQCB9	Not done (known dischargers addressed with NPDES permits and submital of self-monitoring reports is required).	Limited staff and funding.	None.
Assess 779	Evaluate the current confined animal feeding operations (CAFO) programs being implemented at the regional level.	SWRCB	Provided comment on Region 5' s proposed Waiver Program and administrative draft NPDES permit for AFOs.	The need to respond to the large volume of comments has delayed issuing next draft of NPDES permit	Encourage communication and program development within the SWRCB/RWQCB system.
Coordinate 1387	Coordinate actions with State and local regulatory agencies and stakeholders on DPR lands.	DPR	Lack of resources and funding prevented coordinated effort.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	
Plan 799	Development of manure management strategy for equestrian facilities.	RWQCB2	Manure management projects through 319 grant. Pilot projects on several equestrian facilities in progress.		RWQCB will continue to manage 319 (h) grant for manure management strategies to 12/03.
Plan 808	Determine Best Management Practices (BMP) for reducing and controlling agricultural facility wastewater and runoff from confined animal facilities	RWQCB3	Occasional complaint or response actions were conducted by RWQCB staff.	Insufficient resources were available to address this activity.	

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 800	Draft implementation control strategy.	RWQCB4	Data shows that most Regional Board 4 CAFOs are residential and non-Agricultural. Further refinement of control strategy required.	Plan will not be possible as industry based as most CAFOs are residential in Region 4. Limited funds available.	Planning will be executed on a watershed level with assistance by stakeholder groups and local agencies and incorporated into TMDLs.
Plan 809	Determine Best Management Practices (BMP) for reducing and controlling agricultural facility wastewater and runoff from confined animal facilities	RWQCB4	Activity was accomplished in 1998 through a grant by Malibu Creek Watershed Commission for manure and horse corrals.		Document needs to be modified for various watersheds.
Plan 811	Determine Best Management Practices (BMP) for reducing and controlling agricultural facility wastewater and runoff from confined animal facilities	RWQCB6	Reviewed reports of waste discharge for adequacy of BMPs.		Continue ongoing activities.
Plan 812	Determine Best Management Practices (BMP) for reducing and controlling agricultural facility wastewater and runoff from confined animal facilities.	RWQCB7	A general permit for concentrated animal feeding operations (CAFOs) facilities in the region was adopted in 2001.		
Plan 1330	Develop manure removal strategies.	RWQCB8	Manure stockpiling activities at CAFOs prohibited in dairy permit, but manure can be stored for up to 6 months. Manure management and removal has improved.	None.	Continue Ongoing Activities.
Plan 1333	Develop nutrient management plans.	RWQCB8	The Agricultural nutrient management program for the Newport Bay and San Diego Creek watershed has been developed. Occurred 1998-2002.	None.	Continue development of the watershed.
Plan 814	Determine Best Management Practices (BMP) for reducing and controlling agricultural facility wastewater and runoff from confined animal facilities	RWQCB9	Not done (known dischargers addressed with NPDES permits and submitaal of self-monitoring reports is required).	Limited staff and funding.	

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Target 1385	In State Parks Services (SPS) units where NPS pollution is not in compliance with water quality standards, prescribe appropriate MPs.	DPR	Lack of time and resources prevented activity completion.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding reports.	
Target 793	Prioritize by location of impaired waters, size of Confined Animal Feeding Operations, and number of facilities. Identify water segments impaired by Animal Feeding Operations.	RWQCB4	Mapping and identification accomplished.	Prioritization by size not effective, since most facilities are small. Limited resources available. §303(d) listing method is not sufficiently specific.	Further sort Animal Feeding Operations in to priority classes and overlay with GIS §303(d) Layer.
Implement 1357	Participate in the California Dairy Quality Assurance Program (CDQAP).	CDFA	CDFA contributes third party evaluations of dairy facilities (SWRCB, et. al.) ; 125 dairies certified as meeting objectives of CDQAP. Grant proposals for two watershed groups submitted to Calfed for assessment and implementation of MMs – neither funded.		Continue ongoing efforts.
Implement 1389	Include related policy in department operations manual.	DPR	Hazardous Materials Chapter in Department Operations Manual.		Continue ongoing activities.
Implement 835	Inspect up to 40 dairies and other confined animal facilities.	RWQCB2	All dairies inspected and ranked according to compliance with animal waste guidelines.		
Implement 836	For those facilities where problems are identified, initiate appropriate actions (followup inspections, notices to comply, Notice of Violations [NOVs], Reports of Waste Discharge [ROWDs] and permits as needed).	RWQCB2	Enforcement taken at dairies that were not in compliance; WDR being developed.		Continue enforcement activities as needed; general WDR for dairies to be developed in 03-04.
Implement 851	Establish database to track progress on animal waste facility inspections; continue to track and monitor.	RWQCB2	Database established.		Database completed; tracking will continue.

Implement 826	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections. Consider issuing a general Waste Discharge Requirement (WDR) in Central Valley.	RWQCB2	All dairies inspected and ranked according to compliance with animal waste guidelines		Inspections are ongoing.
Implement 827	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections. Consider issuing a general Waste Discharge Requirement (WDR) in Central Valley.	RWQCB3	Site inspections and follow-up conducted.	Inadequate resources.	Develop a waiver for irrigated Agriculture.
Implement 837	Identify MPs currently in place.	RWQCB4	*Incomplete--to be reported by Macaria or Raymond at R4*	Limited resources available.	Identification will continue as more MMs are identified by land user.
Implement 839	Draft waiver for facilities that implement Resource Control Plans to protect water quality standards.	RWQCB4	Coordinate with Senate Bill 390 team.	Not practicable due to residential nature of most facilities. Limited resources available.	May reconsider in future for the very few facilities.
Implement 852	Review success of Management Practice for Animal Feeding Operations.	RWQCB4	Contract for horse facilities has been delayed.	Logistical problems due to high number of very small facilities located in pockets region wide. Limited resources available.	Discussion forthcoming regarding how to review.
Implement 828	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections. Consider issuing a general Waste Discharge Requirement (WDR).	RWQCB4	Known violations are being addressed through development of WDR' s.	Budget restrictions limit the RWQCB' s ability to conduct inspections.	Permit facilities with known WQ violations on case by case basis.

Implement 830	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections.	RWQCB6	Completed inspections, responded to complaints, reviewed reports of waste discharge and completed enforcement actions.		Continue ongoing activities.
Implement 831	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections.	RWQCB7	A general permit for Concentrated Animal Feeding Operations (CAFOs) facilities in the region was adopted in 2001.		Enforce WDRs.
Implement 1334	Implement nutrient management plans.	RWQCB8	The Agricultural nutrient management program for the Newport Bay and San Diego Creek watershed has been developed.	None.	Continue implementation of the watershed nutrient management plan.
Implement 1332	Implement updated dairy general NPDES permit.	RWQCB8	Dairy permit revision in 1999: All CAFOs required to develop and implement Engineered Waste Management Plans (EWMPs) on a staggered schedule over 3-4 year period. More than 85% of required CAFO operators have submitted EWMPs for RWQCB 8 staff evaluation, and the remaining 15% are in preparation. In addition, a significant percentage of operators with future due dates have already submitted EWMPs. Permit updating has been occuring from 1998-2002.		Implement updated permit.
Implement 1336	Develop and implement nutrient monitoring program.	RWQCB8	Dischargers are self-monitoring or are requried to participate in the Regional Monitoring Program (RMP) required. Regional Board to initiate investigations into unknown sources. Monitoring and Reporting program for Nurseries (WDRs) revised in 1999. RMP approved by Regional Board on October 7, 1999. First RMP report, (including Algal Survey) submitted November 2001. Future reports to be part of NPDES annual report.	None.	Continue Ongoing Project.

Implement 1337	Pesticide Runoff Management Plan: Implementation.	RWQCB8	Runoff Monitoring without exceedances; Usage Analysis (declining usage trends for pesticides that are water quality problems); BMP Implmentation (installation of physical BMPs e.g. filter strips); Education/Outreach (review and improve effectiveness of Integrated Pest Management - IPM - and Country Programs). Dischargers are self-monitoring or are required to participate in Regional Monitoring Program (RMP). Regional Board to initiate investigations into unknown sources. Monitoring and Reporting program for Nurseries (WDRs) revised in 1999. RMP Plan approved by Regional Board on October 7, 1999. First RMP report, (including Algal Survey) submitted November 2001. Monitoring and Reporting program for nurseries (WDRs) revised in 1999.	There are two general tasks where we have fallen behind the schedule established in the TMDL. One area is the revision of permits to incorporate load allocations from the nutrient TMDL. Some of these permits have been revised, others are in the process of being revised. Lack of adequate staff resources are the main reason for the delay along with the need to evaluate additional monitoring data that the dischargers have been required to collect.	Future Reports to be part of NPDES report.
Implement 1338	Coordinate TMDL unit work with stakeholders to document levels of use and associated impacts to beneficial uses.	RWQCB8	The Toxics TMDL has not yet been adopted. The diazinon and chlorpyrifos TMDL is based on impairment to beneficial use as evidenced by toxicity attributed to these petsticides in the watershed. 1998-2002	Reason for delay: The Toxics TMDL was in the one-month public comment period (just closed May 28, 2002). USEPA is the lead on it. It will probably be adopted after RWQCB 8 and EPA respond to the comments that were received and revise the draft.	It will probably be adopted after RWQCB8 and EPA respond to the comments that were received and revise the draft.
Implement 1339	Review the control and eradication program from red imported fire ants (RIFA) in Southern California in coordination with DFA and CDPR.	RWQCB8	The monitoring program for evaluation of impacts from RIFA eradication program is underway and conducted by CDPR. Monthly monitoring memos are forwarded to us for use in TMDL -- pesticide runoff from RIFA program. Monitor for pesticides. RB 8 attends meetings and this is an ongoing program.		RWQCB 8 will continue attending meetings and this is an ongoing activity.

Implement 1340	Prevent aquatic toxicity from organophosphate pesticide residues through voluntary efforts to monitor for compliance with water quality standards.	RWQCB8	Most of the data we have for the toxics TMDL is from a 319h and 205j project that was awarded to Orange County. Staff is not aware of voluntary efforts to collect organophosphate data in the sense of citizen monitoring. This data was collected cooperatively without being required by Regional Board orders - in this respect, the data was voluntary.	
Implement 1343	Coordinate TMDL unit work with stakeholders to document levels of use and associated impacts to beneficial uses.	RWQCB8	This is being accomplished through work with the Fecal Coliform Technical Advisory Committee, the Orange County Health Care Agency, City of Newport Beach, UC Irvine, and RWQCB8.	Continue ongoing activities.
Implement 1344	Develop urban pesticide control education program. Pesticide control program or household pesticide media campaign.	RWQCB8	The IEUA implemented an outreach program to address household use of pesticides and herbicides as part of their TRE efforts. Also, the Central Contra Costa Sanitary District has a similar program for the same purpose. Their website features helpful information. http://www.centralsan.org/education/residential.html	Continue ongoing activities.
Implement 1345	In public schools, participate in watershed-awareness activities.	RWQCB8	This outreach includes presentations in classrooms, providing curriculum and brochures, enviroscape presentations, and attending various festivals and water-related activities. In addition, Region 8 has implemented an Enviroscape check-out process, so that stakeholders may borrow the Enviroscape to conduct presentations of their own.	Continue ongoing activities.
Implement 1346	Assess effectiveness of current vessel sewage waste programs in selected regions.	RWQCB8	Assessment of effectiveness of current vessel sewage waste programs in selected regions is in progress. We are still finalizing the updated sampling plan.	Still finalizing the updated sampling plan in Newport Bay.

Implement 1347	Coordinate wetlands-related projects in Southern California with the work of the wetlands recovery project.	RWQCB8	Ongoing coordination with the CCC. CCC staff oversee the overall program (coordination of wetlands-related projects in Southern California with the work of the wetlands recovery project and the WRP database). There are several agencies participating in the collaboration from Regional Board 3 all the way to the Mexican border. The Executive Officers from Regional Boards 3, 4, 8, 9, the USFWS, and the USACE are also involved. This program is involved in acquisition and restoration of coastal wetlands. Restoration of wetlands come from nonporfit, local agencies and request grant funds for restoration (e.g. hydromodification…) Projects have been included in the database and can be found at http://www.coastalconservancy.ca.gov/sccwrp the project list is ongoing. A list of projects was approved by the governors on 6/6/02.		Continue ongoing activities.
Implement 1348	Coordinate and assist SCC WRP coastal monitoring activities.	RWQCB8	There is no endpoint to the ongoing coordination with SCCWRP in coastal monitoring activities. SCCWRP is helping Region 8 in monitoring activities (e.g. reviewing sampling programs – helping determine the difference between Agricultural sources and natural or open space sources, such as urban runoff permits.) Data staff is collecting is a combination of point source and NPS pollutants in the watershed.		Quarterly progress reports are submitted to us at Region 8 and quarterly reports are being used to develop TMDLs.
Implement 1349	Implementation of monitoring program for TMDL development.	RWQCB8	Efforts to implement a monitoring program for TMDL development. The TMDLs are still being developed. In Big Bear Lake, by approximately next June, nutrient load allocations will be set. Region 8 will try and de-list metals in December of this year pending current monitoring. Sediment is still a problem. Load allocations are expected at around the same time as load allocations for nutrients. We are still monitoring for nutrients, sediment, and metals for Big Bear Lake.	Reason for the delay: Nutrient monitoring started in 2001 and there has been little to no flow in the tributaries for the year 2001-2002. As a result, sampling has taken longer than expected, for we need to know what external loads are from surrounding tributaries of Big Bear Lake.	Continue ongoing activities.

Implement 1350	Review TMDL compliance monitoring data and evaluate TMDL compliance.	RWQCB8	Regarding the fecal coliform TMDL: we are using the phased approach. There are no target load allocations yet. We are still in the sampling/source identification phase. We are currently in the source identification phase, hence expected dates for completion are not yet available. Regarding pesticides: Discharger self-monitoring or participation in Regional Monitoring Program (RMP) required. RB to initiate investigations into unknown sources. Monitoring and Reporting program for Nurseries (WDRs) revised in 1999. RMP Plan approved by Regional Board on October 7, 1999. First RMP report, (including Algal Survey) submitted November 2001.	Future reports to be part of NPDES annual report. There are two general tasks where we have fallen behind the schedule established in the TMDL. One area is the revision of permits to incorporate load allocations from the nutrient TMDL. Some of these permits have been revised, others are in the process of being revised. Lack of adequate staff resources are the main reason for the delay along with the need to evaluate additional monitoring data that the dischargers have been required to collect. The other area where the nutrient TMDL is behind schedule is the review of water quality objectives in San Diego Creek. This task is taking longer than anticipated due to the need for collecting and analyzing new data.	Continue ongoing activities.
Implement 833	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections. Consider issuing a general Waste Discharge Requirement (WDR) in Central Valley.	RWQCB9	All SD region dairies and one pig farm are regulated with NPDES permits for non-NPDES WDRs; submittal of self-monitoring reports is required and inspections are conducted; enforcement action is taken as appropriate.	Limited staff and funding.	Continue current activities.

Implement 822	Work with USEPA and NRCS on implementation of the joint unified AFOs National Strategy. Target EQIP funding to needed projects through participation on the State Technical Committee.	SWRCB	Meet periodically with USEPA staff prior to and following release of CAFO rules in December 2002. Promote use of equip funds for facility improvements. Information on new CAFO regulations was provided to RWQCB staff. Regional Board 5 is taking the lead on developing a NPDES permit to implement the regulations.	It is possible that USEPA will not provide any funding for implementation of the CAFO regulations thus delaying implementation.	
Implement 824	Address known dischargers in violation of water quality standards through increased use of regulatory authorities: more inspections, increased number of inspections. Consider issuing a general Waste Discharge Requirement (WDR) in Central Valley.	SWRCB	An attorney task force was formed to address AFO discharge violatons through civil or criminal actions in addition to or in lieu of issuing CandA Orders and ACLs. Over 100 civil and criminal actions were filed resulting in effective control of discharge violations. The process of using an attorney task force appears to be more effective that issuing general WDRs. Each of the nine Regional Boards was involved with implementing this plan.	The need to issue federal NPDES permits to AFOs that meet certain criteria will divert staff resources from inspections and enforcement actions.	Continue inspection and enforcement activities to the extent possible given the diversion of staff resources to NPDES permmitting activities.
Report 856	Summarize Confined Animal Feeding Operations.	RWQCB4	Completed as part of the Non-point Source semi-annual report. All existing facilities information was gathered, placed onto spreadsheets and mapped.	Existing CAFOs appear to be predominated by small, residential facilities in certain watersheds, while targetting big intensified agricultural areas (e.g. lack of intensified agricultural areas).	Policy, outreach or education issue, best handled in co-op with watershed groups and local agencies.

Management Measure 1C Nutrient Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 901	Disseminate information on use of urban-derived compost and mulch at trade shows, Resource Conservation District meetings, conferences, etc.	CIWMB	Educational materials distributed at various events. CIWMB publication available on project at www.ciwmb.ca.gov/organics/Pubs.htm	Lack of funding to attend events.	Continue ongoing activities.
Coordinate 924	Implement Salinas Valley Compost; as well as the implementation of the Cover Crop Project to evaluate the synergistic relationship between compost and cover crop management in vegetable production.	CIWMB	CIWMB publication available on project at www.ciwmb.ca.gov/organics/Pubs.htm	No funding for future agriculture projects.	Continue ongoing activities.

Coordinate 923	Implement Green Material and Dairy Manure Co-Composting Project to evaluate co-composting of the City of Sacramento's green material with dairy manure. The composting site will be in the proximity of the Cosumnes River Nature Preserve.	CIWMB	Composting facility never built.	Facility never built due to economic considerations.	
Coordinate 905	Implement TMDLs for CWA §303(d) listed water bodies.	RWQCB1	Garcia implementation (currently only implementation plan in Regional Boardd 1).	As further implementation plans are developed, available resources will likely dictate Regional Board 1' s ability to fully implement the plans.	
Coordinate 894	Develop MOU or MAA with other regulatory agencies to control nutrients.	RWQCB2	State Board lead, progress unknown.	Nutrient Management Plan not yet field ready.	Not determined.
Coordinate 909	Implement strategies for protection of resources from agricultural pollution, including nutrients, in cooperation with the Monterey Bay National Marine Sanctuary Water Quality Protection Program (MBNMS) WQPP.	RWQCB3	Participate in Monterey Bay National Marine Sanctuary Water Quality Protection Program (MBNMS) plan formation, fund practice implementation. Agricultural Sanctuary Plan was Completed.		Continued plan implementation.
Coordinate 906	Implement TMDLs for CWA §303(d) listed water bodies.	RWQCB3	TMDLs and implementation plans developed for San Lorenzo River, Morro Bay and other water bodies as described in TMDL Project Tracking Tool.		Continue as described in TMDL Project Tracking Tool.
Coordinate 908	Implement County Farm Bureau' s (CFB' s) NPS Initiative pilot projects.	RWQCB3	Thirteen farm groups have formed in MBNMS Area.	Lacking budget for payment of coordinators.	Facilitate formation of 12 more farm groups.
Coordinate 910	Draft waiver for facilities that implement nutrient management programs to protect water quality standards.	RWQCB4	Participated in waiver policy discussions, and participated with other agencies.	NPS implementation policy was not completed.	Work with the Agricultural Oversight Committee and local planning or regulatory agencies on a case-by-case basis.

Coordinate 896	Develop MOU or MAA with other regulatory agencies to control nutrients.	RWQCB4	Ventura Co. Agriculture Oversight Committee (AOC), actively forming policy, BMPs, outreach and education.	Statewide Agriculture policy - NPS implementation policy, which is not yet finalized.	Internal policy must be established in coordination with TMDL, StormWater, Groundwater Units. MOU' s/MAA' s should be coordinated at a regional level and not specific only to Agriculture.
Coordinate 914	Implement BMPs on cotton to reduce application of synthetic fertilizer on cotton crops in priority watersheds.	RWQCB5	23 Growers recruited to program, mentor farmers provide technical support, weekly monitoring of beneficial insects, pest pressure and crop progress; weekly newsletter sent to 400 growers. Contract executed Septermber 19, 2001. Biological Agriculture Systems In Cotton (BASIC) Program recruitment for 2003 has held steady at 23 growers throughout the growing season. BASIC participation is expected to increase to 30 growers in the Firebaugh region in 2003. Mentor farmers have continued to provide technical support at field days, and through phone calls and personal visits, to help growers better understand how to move away from chemical dependence. Weekly monitoring, data collection, Newsletter upkeep, outreach to Dos Palos High School and the West Side Resource Conservation District. Three on-farm trials were begun.		Data analyses, and project effectiveness evaluations have begun. Results will be used to discuss and guide growers in the 2003 season.
Coordinate 913	Implement outreach and education project to encourage walnut farmers to implement agricultural practices that reduce overall use of pesticides and synthetic fertilizers.	RWQCB5	Customized farm plans, pest and disease monitoring for 10 growers; workshops and technical information. The 319h Contract # is 0-032-255-0 with the Community Alliance for Family Farmers.		Final report forthcoming.
Coordinate 912	Implement program for alternative practices for prunes.	RWQCB5	Restored 33 acres of riparian habitat adjacent to the Sacramento River and implemented BMPs for prune and walnut orchards; entitled Phelan Island Resotration Project. 319H Contract#:6-069-255-0 with the Nature Conservancy.		
Coordinate 897	Develop MOU or MAA with other regulatory agencies to control nutrients.	RWQCB7	A Salton Sea Nutrients TMDL is being developed, which will provide the incentive for management agency agreements.		Develop and implement TMDL, with possible incorporation of MOUs and MAAs.

Coordinate 899	Develop MOU or MAA with other regulatory agencies to control nutrients.	RWQCB9	Not done.	Limited staff and funding.	None.
Coordinate 917	Update WDRs for commercial nurseries.	RWQCB9	Not done. SD region nurseries are covered by WDR waiver. Some municipal storm water permitees are dealing with nurseries.	Limited staff and funding.	None.
Coordinate 907	Implement TMDLs for CWA §303(d) listed water bodies.	RWQCB9	The TMDL for Rainbow Creek is the only San Diego region TMDL that has to do with nutrients. It is nearing completion but has not yet been approved by the SDRWQCB.	TMDL development is a resource intensive, time consuming, and bureaucratic process. There are also stakeholder issues.	Continue development of TMDL.
Coordinate 892	Develop MOU or MAA with other regulatory agencies to control nutrients.	SWRCB			
Plan 888	Develop standards for cadmium, arsenic, and lead in commercial fertilizing materials.	CDFA	Completed 1/1/02; regulations for arsenic, cadmium and lead in inorganic commercial fertilizers.		
Plan 890	Develop and release grant applications for watershed coordinators.	DOC	RFGAs developed and released to Resource Conservation Districts in October 2000.	None	Continue ongoing activities.
Plan 876	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB2	RWQCB staff worked with producers to encourage certification through California Dairy Quality Assurance Program. Nutrient management plan under development at state NRCS.	Historically low milk prices and limited federal EQIP funding.	Continued support of CDQAP, Tomales Bay Agricultural Group. Assist in technology transfer for composting and anaerobic digesters, pathogen studies, and outreach projects.
Plan 862	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB2	Numeric criteria being developed through California Dairy Quality Assurance Program. California Nutrient Management Practice (CNMP) under development, working with Tomales Bay Agricultural Group, Sonoma-Marin Animal Resources Committee.	Unavailable information on hydrology.	Continue to support research, demonstration, and planning projects through grants and cost-shares.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 877	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB3	Funding was provided for watershed and individual ranch management plans.	Lack of National Resource Conservation Service and Resource Conservation District time and staff to aid growers with engineering designs.	Continue to cooperate with MBNMS group.
Plan 863	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB3	Participated in MBNMS plan implementation. Monitoring was conducted by one watershed group. A Grant directed towards Resource Conservation Districts for practice implementation. A Nitrate use survey in Salinas valley was completed.	Lack of funds for sufficient outreach efforts.	Monitor 4 more watershed groups, continue directing funds towards practice implementation.
Plan 884	Draft implementation control strategies.	RWQCB4	Nutrient Management Practice guidelines have been incorporated into an initial and yet unmandated document, adapted from EPA and university research docs.	Additional coordination with Resource Conservation District' s needed for broad implementation. Limited funds available.	Formalize implementation policy.
Plan 878	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB4	The Agricultural Oversight Committee is working to compile crop-specific BMPs.	Diversification of Agriculture, soil types, watershed characteristics preclude standardization of industry-wide BMPs.	Will continue as a regional coordinated effort by stakeholders and agencies.
Plan 864	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB4	Standards are being addressed by Regional Board 4 TMDL Units, based on Water Quality data, EPA and State criteria.	Data shows that it might be hard to isolate Agricultural from residential or large landscaped runoff areas for nutrients in our region. Limited resources available.	Continue to work with TMDL units, as well as develop coordinated policy to include multiple factors contributing to nutrient loading.
Plan 885	Develop TMDL for dissolved oxygen (DO) in the Stockton Deep Water Ship Channel of the Sacramento-San Joaquin River-- includes source loading studies and modeling.	RWQCB5	Technical TMDL is scheduled for completion June, 2003.	None	Develop Program of Implementation and Basin Plan Amendment.

Plan 865	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB5	Staff continues coordinating with the State Board Nutrient Criteria Team.	
Plan 880	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB6	Staff is coordinating the completion of grant funded projects with agricultural BMP elements in Mono County.	Continue ongoing activities.
Plan 881	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB7	Regional Board staff participated in the process of Federal §319(h) project selection for FFY 2003 RFP. As a result, Region 7 was approved for two proposals; one with the University of California Cooperative Extension in Holtville on BMPs for phosphorus reduction in the Salton Sea Watershed ($241,500) and the second with the Imperial Valley Conservation Research Center Committee on nutrient control of agricultural runoff water ($249,600).	This activity will be part of the Salton Sea Nutrients TMDL
Plan 867	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB7	Regional Board staff is currently working on establishing a numeric target for the Salton Sea Nutrients TMDL. In May 8, 2002, Regional Board staff conducted a scientific workshop titled "What the Sea should look like?". Participants in the Workshop included leading scientists on the Salton Sea from the US Fish and Wildlife, the USGS, The NRCS, and the Salton Sea Science Office. The Alamo River, the New River, and the Coachella Valley Stormwater Channel are the the main sources of nutrients into the Salton Sea. Implementing the Alamo and New Rivers Sediment TMDLs should reduce Phosphorous loading into the Sea. The Salton Sea Nutrients TMDL is due for Regional Board consideration in early 2004.	This activity will be part of the Salton Sea Nutrients TMDL
Plan 883	Determine Best Management Practices (BMP) for managing agricultural nutrients.	RWQCB9		

Plan 874	Determine Best Management Practices (BMP) for managing agricultural nutrients	RWQCB9	The TMDL for Rainbow Creek is the only San Diego region TMDL that involves nutrients. It is nearing completion but has not yet been approved by the SDRWQCB.	Resource intensive, time consuming and bureaucratic process. There are also stakeholder issues.	Development of TMDL.
Plan 869	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	RWQCB9	SDRWQCB staff are participating in regional technical advisory team.	Limited staff and funding; limited ambient WQ data.	Continue ongoing activities.
Plan 860	Develop regional numeric nutrient criteria in cooperation with USEPA, RWQCBs, and Nutrient Criteria Team.	SWRCB	Work began in 1999 on this activity. A pilot project in Southern California was completed in 2000. Information obtained from this project will guide future actions for criteria development.		
Plan 870	Develop standards for heavy metals in organic and inorganic fertilizers.	SWRCB	Standards were developed.		
Implement 1353	Regulate fertilizer materials and soil amendments pursuant to interagency MOU.	CDFA	No final agreement reached or signed.	Lack of agreement among stakeholders ended project.	Termination of activities.
Implement 1355	Monitoring for pesticide runoff from the Red Imported Fire Ant (RIFA) control program.	CDFA	Treatments modified to minimize pesticide use. Funding to expire 7/1/04. Intense environmental monitoring in first 3 years of program showed minimal effects.	Lack of funding.	Re-evaluate, and control measures added as needed--subject to funding.
Implement 911	Restore riparian areas – replace orchard with riparian vegetation.	RWQCB5	Restored 33 acres of riparian habitat adjacent to the Sacramento River and implemented BMPs for prune and walnut orchards. It is entitled the Phelan Island Restoration 319H Contract #6-069-255-0 with the Nature Conservancy.		

Implement 1335	Update WDRs for commercial nurseries.	RWQCB8	Dischargers are self-monitoring or are required to participate in Regional Monitoring Program (RMP). Regional Boards to initiate investigations into unknown sources. Monitoring and Reporting program for nurseries (WDRs) revised in 1999. RMP Plan approved by Regional Board on October 7, 1999. First RMP report, (including Algal Survey) submitted November 2001. Future reports to be part of NPDES annual report. There are two general tasks where we have fallen behind the schedule established in the TMDL. One area is the revision of permits to incorporate load allocations from the nutrient TMDL. Some of these permits have been revised, others are in the process of being revised. Monitoring and Reporting program for nurseries (WDRs) revised in 1999.	Lack of adequate staff resources are the main reason for the delay along with the need to evaluate additional monitoring data that the dischargers have been required to cellect. 1999-2002.	Requirement of Newport Bay TMDL.
Track and Monitor 1390	When interacting with field units ask employees if they are aware of BMP package, DOM policy, NPS program, etc.	DPR	Lack of time and labor prevented tracking.	Lack of time to interact with field units in regards to BMP package, DOM policy, NPS porgram, etc. prevented communication.	
Report 940	Summarize nutrient management program control tasks.	RWQCB4	Nutrient Management Practice guidelines have been incorporated into an initial and yet unfinished document, adapted from EPA and university research documents.	Inter-relationships between all facets of Agriculture make it difficult to isolate nutrient runoff from other Agriculture components. Report should be presented in Coordinated Resource MPs format.	Updated goal is to combine Nutrient MPs with other MPs, e.g. Pesticide Management Practices, into Coordinated Resource Management Practices (CRMPs)-Report should reflect this.

Management Measure 1D Pesticide Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Track and Monitor 982	Coordinate water quality sampling program for RIFA program.	SWRCB	Coordination occurred. SWRCB Staff made recommendations on monitoring design. Review of monitoring results over life of eradication effort. Reporting to Regional Boards and State as new areas appear.	Some recommendations considered infeasible.	Continue ongoing activities and monitoring new areas as they appear.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Assess 943	Develop statistical methodology for surface water database in order to develop estimates for probabilities that target levels will be exceeded.	CDPR	Study completed and the report accepted.	Study showed that data was not necessarily usable for this kind of modeling.	
Assess 942	Review water quality lists of stream segments.	RWQCB4	Completed, §303(d) list of impaired waters used to establish TMDL list.	§303(d) list does not always identify pesticides as a cause of impairment-i.e. toxicity.	Complete TMDL for impaired waters.
Coordinate 957	Monitor the control and eradication program for Red Imported Fire Ants (RIFA), Glassy-winged Sharpshooter (GWSS) and other pests.	CDPR	Project completed. Final reports issued.		
Coordinate 956	Prevent and mitigate threats to water quality from pesticides through coordination with the RWQCBs and implementation of the MAA and Pesticide WQMP with the CDPR.	CDPR		Held joint seminars and reviewed documents as appropriate.	
Coordinate 959	Coordinate monitoring activities with input from the Salton Sea Water Quality Technical Committee, which RWQCB staff will chair.	RWQCB7	On-going. The Salton Sea Science Office is currently working on developing Salton Sea Monitoring Plan. Regional Board staff are active members of the Salton Sea Science Advisory Committee.	Money and staff.	This activity will be part of the New and Alamo Rivers Pesticides TMDLs to be developed in the next 5 years.
Plan 955	Determine Best Management Practices (BMP) for reducing and controlling agricultural pesticide use.	CDPR	Done, as appropriate as part of TMDL implementations.		
Plan 954	Characterize runoff of pesticides from turf, bare ground, and other surfaces under a variety of conditions.	CDPR	Runoff of pesticides characterized from turf, bare ground, and other surfaces under a variety of conditions.		
Plan 947	Develop TMDL for diazinon.	RWQCB2	Preliminary TMDL report completed for urban creeks diazinon		Continuing development of TMDL according to schedule developed.

Plan 948	Develop strategies for protection of resources from agricultural pollution, including pesticides, in cooperation with the Monterey Bay National Marine Sanctuary Water Quality Protection Plan.	RWQCB3	Participate in MBNMS plan formation, fund practice implementation. Agriculture Sanctuary Plan was completed.		Continued implementation of plan.
Plan 949	Draft implementation control strategies.	RWQCB4	Pesticide Management Program guidelines have been incorporated into an initial and yet unmandated document, adapted from EPA and university research documents.	Limited funds available.	Formalize implementation policy.
Plan 950	Participate in the Sacramento River Watershed Program (SRWP) to develop an OP pesticide management strategy.	RWQCB5	Participate in the OP Focus Group and management strategy development. Management strategy completed		.
Plan 951	Develop TMDL for diazinon and chlorpyrifos.	RWQCB5	Implementation framework and technical TMDL completed; Basin Plan Amendment (covering the Sacramento and Feather Rivers) will be taken to Regional Board for consideration by October, 2003.	Changes in staffing have delayed completion of Basin Plan Amendment staff report.	Basin Plan Amendment for Regional Board consideration October, 2003.
Plan 952	Develop water quality objectives for rice pesticides.	RWQCB5			
Target 945	Prioritize water segments through TMDL development or implementation schedule.	RWQCB4	Pesticide Management Program guidelines have been incorporated into an initial and yet unfinished document, adapted from EPA and university research documents.	Monitoring funds have been reduced statewide.	Implement PRISM Grants.
Implement 1354	Prevent nonpoint source pollution from pest eradication projects.	CDFA	Completed on each project and ongoing in nature. Environmental monitoring is routine during eradication projects.		Continue ongoing activities.
Implement 974	Provide grants for applied research focused on IPM practices and technologies.	CDPR	Funded 40 projects, totaling $1.1million.	Program discontinued for lack of funding. Existing projects will be completed.	

Implement 972	Prevent pesticide contamination of ground water through education, modeling, and monitoring. Components include: voluntary wellhead protection stewardship programs with the County Agricultural Commissioners; CDPR's registration process in which potential adverse effects to ground water quality are evaluated; and creation of Pesticide Management Zones (PMZs) which restrict or prohibit use when criteria are met.	CDPR	Partially implemented.	Have worked with some local agencies to implement--funding reductions limited activities.	
Implement 975	Amend ground water protection regulations to be more preventive rather than reactive.	CDPR	Regulations noticed on April 4, 2003.	Took longer than anticipated to resolve technical and policy issues.	
Implement 973	Form alliances with the regulated community to jointly focus on reducing environmental risks while providing pest management solutions using IPM applied research, demonstration, implementation, and outreach.	CDPR	Funded 27 programs totaling $2.3 million.	Program discontinued for lack of funding. Existing projects will be completed.	
Implement 962	Reduce pesticides in both agricultural and urban surface water through local outreach to promote MPs that reduce pesticide runoff and through CDPR's registration process. Fund and assist in pesticide control applicator and grower training promoting pesticide management. Mitigate impacts through self-regulation as well as regulatory authorities of CDPR, SWRCB, and RWQCB.	CDPR		Due to funding limitations, no projects were initiated. CDPR participated in programs initiated by partner agencies.	
Implement 1371	Include related policy in Department Operations Manual. Also addressed MMs 1C and 1G	DPR	Hazardous Materials Chapter in DOM.		Continue ongoing activities.

Implement 1379	Provide Orphan Spill training to emphasize clean up of potential NPS pollution agents.	DPR	All districts participated in Orphan Spill training. Successful spill responses were provided. This activity also address MM 1C and 1G.		Continue ongoing activities.
Implement 1376	Develop Spill plans for all Aboveground Fuel Tanks and confirm Management commitment to training employees to reduce potential spills and respond promptly to any spills. This activity also addressed MMs 1C and 1G.	DPR	70+ plans, which are now obsolete due to differences in regulatory Code of Federal Regulations, are being redeveloped.	Regulatory Changes require constant revision of plans.	Continue ongoing activities.
Implement 964	Draft waiver for facilities that implement pesticide management programs to protect water quality standards.	RWQCB4	Participated in Senate Bill 390, Participated with other agencies.	Limited resources.	Additional coordination with Resource Conservation Districts and municipalities.
Implement 968	Prevent aquatic toxicity from OP pesticide residues through voluntary efforts to monitor for compliance with water quality standards.	RWQCB5	Partnership with the Department of Pesticide Regulation in the Sacramento and San Joaquin watersheds. Monitoring data; Rgional Board 5 and CDPR: 99/00 winter monitoring (chemistry – source and load analyses; toxicity – trend monitoring); winter storm monitoring.		
Implement 966	Implement program for alternative practices for prune orchards.	RWQCB5	This is the Pheland Island Restoration 319h Contract # 6-069-255-0 with the Nature Conservancy. The project restored 33 acres of riparian habitat adjacent to the Sacramento River and implemented BMPs for prune and walnut orchards.		
Implement 965	Implement BMPs on cotton to reduce OP applications and other pesticides on cotton crops in priority watersheds.	RWQCB5	319h project to implement Best Management Practices (BMP) on cotton to reduce applications of organophosphate and other pesticides and synthetic fertilizers on cotton crops in priority 1 watersheds in the San Joaquin Valley. Twenty three Growers recruited to program, mentor farmers provide technical support, weekly monitoring of beneficial insects, pest pressure and crop progress; weekly newsletter sent to 400 growers.		Continue ongoing activities.

Implement 967	Implement outreach and education project to encourage walnut farmers to implement agricultural practices that reduce overall use of pesticides.	RWQCB5	319h Project to implement BIOS approach for walnut farmers in the San Joaquin watershed. Customized farm plans, pest and disease monitoring for 10 growers; workshops and technical information.		
Implement 963	Reduce rice pesticide loading in the Sacramento and SJ Rivers by managing water in treated fields so that discharges of pesticides into surface waters do not impair beneficial uses.	RWQCB5			Continue ongoing activities.
Implement 970	Implement water quality monitoring activities in the Salton Sea Watershed for the Coachella Valley Water District, Alamo and New Rivers and the Imperial Valley Agricultural Drains.	RWQCB7	On-going water quality monitoring activities in the Salton Sea Watershed for the Coachella Valley Water District, the Alamo and New Rivers, and the Imperial Valley Agricultural Drains.	Money and staff.	This activity will be part of the New and Alamo Rivers Pesticides TMDLs to be developed in the next 5 years
Implement 1342	Coordinate water quality sampling program for RIFA program.	RWQCB8	The monitoring program for evaluation of impacts from RIFA eradication program is underway and conducted by CDPR. Monthly monitoring memos are forwarded to us for use in TMDL -- pesticide runoff from RIFA program. They monitor for pesticide. Regional Board 8 attends meetings, and this is an ongoing program.		Continue ongoing activities.

Implement 1341	Reduce pesticides in both agricultural and urban surface water through local outreach to promote MPs that reduce pesticide runoff and through CDPD' s registration process. Fund and assist in pesticide control applicator and grower training promoting pesticide management. Mitigate impacts through self-regulation as well as regulatory authorities of CDPR, SWRCB, and RWQCB.	RWQCB8	1. A number of pesticides evaluated in the registration process – CDPR does this. We have a pesticide workgroup and comment on their registration process (how they deal with pesticides). 2. Several pesticide control applicators and growers trained – applicators and growers are licensed by the CDPR. There is a prop 13 contract out there in order to address outreach and training. 3. Decreases in OP (organophosphate) pesticides use as reported in CDPR's pesticide use report database and corresponding increases in the use of lower risk pesticide control products – EPA re-registration agreement works on this. Information is plotted in the CDPR database. Chlorpyrifos and diazinon levels decrease as a result has decreased as a result of EPA action (by phasing out most uses of chlorpyrifos and diazinon). 4. Decreases in surface water toxicity due to OP pesticides. Once the TMDL is done, there will be an implementation plan to monitor toxicity. This will occur once it is adopted by the Board. We have received final reports, and the data shows that toxicity is a problem, but there is not sufficient data to determine a decrease in toxicity. June 17, 2002, EPA established TMDL, hence implementation plan will be adopted approximately March 2003. Then, staff will begin toxicity sampling. 1999-2002	It is difficult to get a hold of the applicators and growers in order to train and license them. They do not need a permit from us.	In regards to pesticide control applicators a prop 13 contract designed in order to address outreach and training. Implementation plan to monitor toxicity underway upon TMDL completion.
Implement 971	Implement strategies for the reduction of Oxadiazon from nurseries	RWQCB9	Not done.	Limited staff and funding.	None.
Track and Monitor 987	Develop and maintain databases on the results of monitoring of surface and ground waters for pesticides.	CDPR	Both databases were updated and maintained during the 5 years.		
Track and Monitor 984	Work with RWQCBs to target funds towards monitoring for TMDL development.	CDPR	Participated in TMDL projects as appropriate.		

Track and Monitor 986	Summarize the status of Management Practice implementation in key counties; establish baseline conditions in 4 small drainages where early implementation is scheduled.	RWQCB5	Monitoring for OP Pesticides was conducted in 4 drainages prior to a 319h contract implementation. Technical memorandum evaluating monitoring results presented to the OP Focus Group.		
Track and Monitor 985	Assess physical habitat conditions and biological communities in agriculturally dominated water bodies.	RWQCB5	Bioassessment monitoring project in the Central Valley. Field work has been completed and a final report is due in December 2003.		Complete the final report.
Report 989	Summarize pesticide MPs program control tasks.	RWQCB4	Pesticide Management Program guidelines have been incorporated into an initial and yet unmandated document, adapted from EPA and university research documents that was completed as part of semi annual report.	TMDL priorities, NPS implementation policy.	Formalize implementation policy.

Management Measure 1E Grazing Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 993	State Coastal Conservancy (SCC) develops measures to reduce impacts of grazing on coastal wetlands and riparian areas; SCC can fund improvements which improve best practices to achieve environmentally sustainable operations; SCC develops demonstration projects to evaluate alternative methods and measures.	SCC	Restoration and Enhancement feasibility, planning and design projects in process in north and central coast watersheds, incuding Lower Klamath River, Humboldt Bay/Eel River; Tomales Bay; Elkhorn Slough; and Morro Bay using funding from Proposition 12.	Funding and Project Staffing; Permitting and Approval Processes; Project Partner Capabilities.	Complete restoration and enhancement feasibility, planning and design projects; Initiate new feasibility, planning and design projects.
Coordinate 1013	Meet with local cattleman's association to discuss concerns and objectives of livestock grazing and water quality.	RWQCB5	Attended over 50 meetings a year. This task is an ongoing activity that has been folded into a general watershed group assistance task for future NPS workplans.		
Coordinate 1010	Participate in the Range Management Advisory Committee to the Board of Forestry.	SWRCB	The Range Management Advisory Committee meets monthly, and the State participates in monthly meetings.	Committee members were unable to reach agreement on the validation for implementation of CRWQMP.	Committee will continue to meet.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 1011	Implement CWA §319 consistency review in cooperation with BLM and other federal agencies.	SWRCB			
Plan 1002	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from livestock grazing.	RWQCB2	Grant given to Tomales Bay Agricultural Group for BMP implementation.		RWQCB will be managing Prop 13 grant to install BMPs on dairies and grazing lands.
Plan 1003	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from livestock grazing.	RWQCB3	Visual Assessment of cattle MPs which caused water quality impacts is on-going. Some outreach via Rangeland Water Quality Classes was accomplished.	Limited resources and higher priorities.	Continue out reach and problem assessment.
Plan 998	Participate in the Monterey Bay National Marine Sanctuary Water Quality Protection Plan to develop strategies for protection of MBNMS resources from agricultural pollution, including rangeland.	RWQCB3	Participate in MBNMS plan formation, fund practice implementation. An Agriculture Sanctuary Plan was completed, - National Resource Conservation Service and Resource Conservation District grants paid for well over 5 projects a year.	Lack of National Resource Conservation Service and Resource Conservation District time and staff to aid growers with engineering designs.	Continued implementation of plan.
Plan 1004	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from livestock grazing.	RWQCB4	RWQCB4 has been working with watershed groups, especially the Malibu Creek Watershed Community To develop the horse owners BMP handbook.	Limited Staff.	Address on a case by case basis.
Plan 1006	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from livestock grazing.	RWQCB6	Analyzed coliform data from selected Tahoe Basin sites for water quality trends. Data used to develop recommendations for BMP improvements. Collection and assessment of data to be used for BMP improvements under way in two Mono County studies.		Continue ongoing activities.
Plan 1007	Determine Best Management Practices (BMPs) for reducing and controlling NPS pollution from livestock grazing.	RWQCB7	A general permit for Concentrated Animal Feeding Operations (CAFOs) facilities in the region was adopted in 2001.		
Plan 1009	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from livestock grazing.	RWQCB9	Not done.	Limited staff and funding.	None.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 997	Participate in the MBNMS WQPP to develop strategies for protection of MBNMS resources from agricultural pollution, including rangeland.	SWRCB	Participation in WQPP meetings through January ' 01. There have been no meetings since. A meeting has been proposed for September ' 03. Completion of Agricultural and Rural Lands Plan in 1999. Implementation is underway by the Sanctuary staff, county Farm Bureaus, NRCS, UCCE and RCD' s.	Staffing changes at MBNMS left no one to lead this activity for two years. The Sanctuary Management Plan is being updated and may impact implementation of of the WQPP. The MOA between agencies participating in the WQPP is under review and may impact implementation of the WQPP.	Continue ongoing activities.
Target 995	SCC projects are located in areas of coastal agriculture adjacent to sensitive natural resource areas, including wetland and riparian areas.	SCC	Priority enhancement projects targeting CWA §303(d) listed coastal watersheds impacting coastal wetlands and riparian habitats.	Funding and Project Staffing; Permitting and Approval Processes; Project Partner Capabilities.	Continue to target priority projects in targeted CWA §303(d) listed watersheds.
Implement 1017	Promote better grazing practices at dairies to protect water quality and habitat.	RWQCB2	Outreach through Tomales Bay Agricultural Group, Sonoma-Marin Animal Waste Committee, CDQAP.	Low milk prices and lack of funding.	Ongoing support for research, demonstration, and planning (grants, cost-shares).
Implement 1016	Inspect 40 dairies annually and inventory current grazing practices.	RWQCB2	All dairies inspected and ranked according to compliance with animal waste guidelines.	Focus has been on compliance status with animal waste guidelines and confined animals.	Will continue working with confined animal facilities and grazing practices.
Implement 1022	Inspect areas with irrigated agriculture and grazing for sediment discharges and recommend or require abatement or new practices as appropriate.	RWQCB3	Grant funding was provided which allowed for project implementation.	Inadequate resources to adequately address activity.	Assist with water quality plan development and implementation.
Implement 1018	Participate in implementation of County Farm Bureau NPS Initiative pilot projects, MBNMS WQPP Action Plan for Agriculture.	RWQCB3	Participate in MBNMS plan formation, fund practice implementation. Agriculture Sanctuary Plan was completed.		Continued implementation of plan.
Implement 1023	Provide technical assistance to implement NPS Program for livestock grazing.	RWQCB5	Staff organized a presentation, conducted field tours, individual meetings (12 per year).		

Implement 1024	Implement restoration project relying on BMP implementation (e.g., livestock enclosure fencing, stream channel erosion control measures, riparian revegetation).	RWQCB5	Two projects each year were implemented including livestock enclosure fencing and off-site watering facilities.		
Implement 1025	Implement program for schools to initiate a watershed education program.	RWQCB5	River center in Upper Pit River was established – an educational center for students.		
Implement 1026	Implement and evaluate Rangeland BMPs.	RWQCB6	Implementation and evaluation is under way at sites in the Tahoe Basin and in Mono County.		Continue ongoing activities.
Implement 1035	SCC projects implement specific project elements or phases of approved enhancement plans.	SCC	Major demonstration projects in process in Tomales Bay and Morro Bay involving BMPs addressing grazing impacts.	Funding and Project Staffing; Permitting and Approvals.	
Track and Monitor 1043	Review all grants that improve water quality.	DOC	DOC always includes water quality elements in its grant programs and selection panels. DOC staff also participates in other departments' grant programs as reviewers (i.e. Caltrans' Environmental Enhancement and Mitigation Program).	None.	Continue ongoing activities.
Track and Monitor 1036	Evaluate and report effectiveness of rangeland BMPs.	RWQCB3	None	Inadequate resources.	Conduct activity if resources become available.
Track and Monitor 1037	Disseminate statewide knowledge of rangeland BMP effectiveness.	RWQCB3	At least two range water quality classes were conducted.	Limited Resources; lack of cooperation from ranches.	Continue participation with classes.
Track and Monitor 1039	Review ranch plans.	RWQCB5	20 ranch plans reviewed for water quality in adjacent Redding area; comments provided to ranchers.		
Track and Monitor 1038	Implement the SWRCB adopted Water Quality Monitoring Program (WQMP).	RWQCB5	Implemented SWRCB Rangeland WQMP.		

Track and Monitor 1040	Conduct selected quantitative or qualitative monitoring to document water quality impacts from grazing activities.	RWQCB5	Monitoring discontinued due to lack of resources.		
Track and Monitor 1042	SCC Enhancement Plans require Management Plans (5 yr. or longer) be prepared.	SCC	All Coastal Conservancy enhancement and management plans require adaptive MMs.	Project staffing.	Continue to track and monitor project progress and project effectiveness.

Management Measure 1F Irrigation Water Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1044	Identify water segments impaired by irrigation return water.	RWQCB4	General Agriculture use map is available for region.	§303(d) list do not specify source, land uses are not identified for all potential irrigation return water sources.	Monitoring and analysis will be ongoing.
Plan 1050	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from irrigation water.	RWQCB3	Participate in MBNMS plan formation, fund practice implementation. Funding was provided to watershed work groups for field days with the irrigation efficiency test.		
Plan 1051	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from irrigation water.	RWQCB4	Agricultural Oversight Committee is preparing materials and conducting workshops.	Many growers are still not aware of or receiving information from the Agricultural Oversight Committee.	Approach will evolve to work at Coordinated Resource MPs level.
Plan 1059	Administer grant to evaluate implementation of economic incentives (load trading program for Grassland Bypass Project).	RWQCB5	The evaluation report was released in Spring 2000.		
Plan 1060	Develop TMDL for selenium in SJ River.	RWQCB5	The technical TMDL was completed in August 2001 submitted for USEPA approval February 2002, and approved by USEPA March 2002.	None.	Activity is completed.
Plan 1058	Develop TMDL for salt and Boron in San Joaquin River.	RWQCB5	The technical TMDL was completed in January 2002; Basin Plan Amendment to implement the TMDL will be taken to Regional Board for consideration by October, 2003.	The need for additional stakeholder outreach has delayed completion of Basin Plan Amendment staff report.	Basin Plan Amendment for Regional Board consideration October, 2003.

Plan 1057	Develop Basin Plan Amendment for salt and Boron in lower San Joaquin River.	RWQCB5	The implementation framework and technical TMDL completed for first phase of TMDL. This included limitations to meet water quality objectives for the San Joaquin River at Vernalis.	Changes in RWQCB priorities have delayed the completion of Basin Plan Amendment.	Salton and Boron implementation program as listed under Activity #1064.
Plan 1061	Participate in stakeholder meetings on salt and Boron implementation control plan. Implement the salt and Boron Control program.	RWQCB5	The technical TMDL report for salt and Boron in the Lower San Joaquin River was submitted to the U.S. Environmental Protection Agency on 22 January 2002. Regional Board Staff is working on a Basin Plan Amendment to implement the TMDL. Public workshops held in August and October, 2002. Implementation does not begin until the Basin Plan Amendment has been approved by the Regional Board.	None.	Basin Plan Amendment for Regional Board consideration October, 2003. Reassessment after Regional Board considers Basin Plan Amendment in October, 2003.
Plan 1053	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from irrigation water.	RWQCB6	Staff is coordinating on one grant funded project that includes this issue.	Limited resources and staff.	Continue ongoing activities.
Plan 1054	Determine best management practices for reducing and controlling NPS pollution from irrigation water.	RWQCB7	Thru March 31, 2003, the USEPA approved three TMDLs for Region 7. Two of the three approved TMDLs include lists of BMPs for irrigation water management.		This activity will be part of TMDL development and implementation.
Plan 1056	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from irrigation water.	RWQCB9	Not done.	Limited staff and funding.	None.
Plan 1046	Develop methods and practices to manage and reduce toxic elements in drainage water.	SWRCB	Annual funding for research and pilot projects initiated in 00/01; two new contracts developed.	Annual funding and one contract terminated in 02/03 in budget cuts.	Develop new regulatory program for on-farm solar evaporators.
Plan 1047	Conduct environmental planning for SJ Valley agricultural drainage.	SWRCB	SWRCB participation in federal-state interagency coordination program, SJVDIP	Lack of DWR funding to continue staffing of interagency program.	Additional funding and staffing needed to restart program.

Implement 1356	Develop methods and practices to manage and reduce toxic elements in drainage water.	CDFA	Twenty-five projects have been funded during this five-year period, focusing on drainage reuse, drainage treatment, salt separation and utilization, and source reduction. Significant reduction in volume of drainage water discharged to San Joaquin River (57,000 acre feet in 1990 to 30,000 acre feet in 2000). Project merger with DWR (Project is funded).		Continue ongoing activities.
Implement 1067	Develop mobile outreach program to demonstrate approved chemigation systems to prevent ground water contamination.	CDPR	Project completed, courses presented statewide.		
Implement 1065	Real time management of salt in the San Joaquin River.	RWQCB5	Cooperative agreement with DWR to monitor and model real time discharge and salinity in the San Joaquin River. Real time data available online at: http://www.dpla.water.ca.gov/sjd/waterquality/realtime/	No funding to continue work.	Secure new funding to continue and expand real time management.
Implement 1066	Implement TMDL for selenium.	RWQCB5	The technical TMDL for the San Joaquin selenium TMDL was completed in 2001. TMDL load allocations have been incorporated into the Agreement for Use of the San Luis Drain and WDRs for the Grasslands Bypass Project. Control methods are being implemented by Grasslands area farmers to meet limits.	None.	Continue monitoring and assessment.
Track and Monitor 1070	Perform effectiveness monitoring for salt and Boron control program in the San Joaquin River watershed.	RWQCB5	Monitoring data available online at: http://www.swrcb.ca.gov/~rwqcb5/programs/agunit/bypass/disclaim.htm		Continue ongoing activity.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 1G Education/Outreach

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1076	State Coastal Conservancy (SCC) develops measures to reduce impacts of agricultural operations, especially impacts from erosion, sediment and grazing, on coastal wetlands and riparian areas; SCC develops demonstration projects to evaluate alternative methods and measures.	SCC	Developed several BMP projects including projects in Tomales Bay, Monterey Bay, and the Oxnard Plain involving technology transfer to private property owners	Funding and Project Staffing.	Continue to assess on-going Education/Outreach needs, project plans and plan effectiveness.
Coordinate 1089	Meet with local cattleman's association to discuss concerns and objectives of livestock grazing and water quality.	RWQCB5	Attend local cattleman' s association meetings. Facilitate workshops. These outreach meetings and workshops were held in fiscal year 2000-01.		Activity completed.
Coordinate 1091	SCC staff closely coordinate with stakeholder partners.	SCC	Coastal Conservancy involved with major partner organizations, including RCDs, DFG, RWQCBs on projects throughout coastal watersheds.	Project staffing.	Continue close cooperation with major partner organizations, including RCDs.
Plan 1079	Determine best prevention and education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB1	Regional Board 1 has worked closely with the Sotyome Resource Conservation District on the grant-funded Fish Friendly Farming program, directed at vineyard operations. Also have coordinated closely with other agencies reviewing vineyard-related issues.	Limited by resources.	Given adequate resources, we would like to increase outreach and interagency coordination on other types of agricultural operations and discharges.
Plan 1080	Determine best prevention and education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB2	RWQCB2 staff attended CDQAP training sessions, Environmental Stewardship Short Course. Work with TBAG and Sonoma-Marin Animal Resource Committee; Awards to dairies in compliance.	Producers certified under CDQAP do not obtain any direct material benefit.	Potential incentives for dairy producers who are certified under CDQAP; aid in acquiring funding; ongoing dairy awards.
Plan 1081	Determine best prevention and education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB3	Monterey Water Agency provided nitrate pocket brochures and test kits, and the National Resource Conservation Service conducted farm water quality classes.		Continue to distribute test kits and give courses to growers.

Plan 1084	Determine best prevention and education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB6	Staff includes NPS pollution and controls as one element of general outreach and education activities.	Limited resources.	Continue ongoing activities.
Plan 1085	Determine best prevention & education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB7	In 2002, Regional Board staff participated in four drainshed meetings facilitated by the Imperial County Farm Bureau. The purpose of these meetings included introducing landowners/growers to TMDLs, discussion of TMDLs in the valley and the benefits of joining the Voluntary Compliance Program. (89 farmers total). Staff facilitated a citizens monitoring workshop that trained growers hands-on techniques of measuring the amount of sediment (turbidity) running off of their fields. Following the training, seven field turbidimeters were loaned out to the Farm Bureau to allow farmers to assess their management practices for sediment reduction (10 farmers). In 2003, staff participated in five drainshed meetings facilitated by the ICFB. The purpose of these meetings included a discussion of the up and coming deadline for TMDL compliance, field management practices and how to navigate around the Farm Bureau' s website (approximately 200 farmers)		Continue current activities.
Plan 1087	Determine best prevention and education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB9	Not done.	Limited staff and funding.	None.
Plan 1088	SCC funds the preparation of Resource Enhancement Plans.	SCC	Enhancement Planning Projects underway in Lower Klamath River watershed; Humboldt Bay/Eel River Valley; Tomales Bay watersheds; Projects using funding from Prop. 12 (2000)	Funding and Project Staffing; Project Partner Capabilities.	Continue to develop project plans using Proposition 40 funds.
Implement 1098	Conduct research, outreach, and education for the regulated community through the FREP (Fertilizer and Research Education Program).	CDFA	Fifty research and education projects completed.		Continue ongoing activities.

Implement 1094	Develop pilot projects to demonstrate BMPs at equestrian facilities.	RWQCB2	Pilot Projects implemented: Insulation of Vegetated Swales and Pasture Rotation and Composting.		
Implement 1096	Prepare and/or distribute education and outreach materials on pesticide management.	RWQCB4	Brochures were developed and distributed regarding Pesticide Management.	There is a need for better delivery at CRMP level due to nature of the Agricultural industry.	Approach will evolve to work at CRMP level.
Implement 1092	Prepare and/or distribute education and outreach materials.	RWQCB4	Agricultural Oversight Committee is preparing materials and conducting workshops.	Many growers are still not aware of or receiving information from Agricultural Oversight Committee.	Agricultural Oversight Committee designed to be ongoing and "institutionalized."
Implement 1097	Outreach and education project to encourage walnut farmers to implement agricultural practices that reduce overall use of pesticides and synthetic fertilizers.	RWQCB5	Outreach and education project to encourage walnut farmers to implement agricultural practices that reduce overall use of pesticides and synthetic fertilizers. 319h Project to implement BIOS approach for walnut farmers in the San Joaquin watershed. The 319h Contract # is 0-032-255-0 with the Community Alliance for Family Farmers.	Customized farm plans, pest and disease monitoring for 10 growers; workshops and technical information.	Final report forthcoming.
Implement 1093	Support development of education center; prepare education and outreach material for erosion control techniques; construct boardwalk and interpretative signs.	RWQCB5	Bank stabilization project completed at the Guinda Bridge and Rumsey locations on Cache Creek. Landowner Guide to Bank Stabilization produced. This is part of a prop 204 contract with Yolo County.		Activity completed.

Implement 331	Train community members in bioassessment procedures and sedimentation issues. Determine best prevention & education programs for reducing and controlling NPS pollution associated with agriculture.	RWQCB7	In 2002, Regional Board staff participated in four drainshed meetings facilitated by the Imperial County Farm Bureau. The purpose of these meetings included introducing landowners/growers to TMDLs, discussion of TMDLs in the valley and the benefits of joining the Voluntary Compliance Program. (89 farmers total). Staff facilitated a citizens monitoring workshop that trained growers hands-on techniques of measuring the amount of sediment (turbidity) running off of their fields. Following the training, seven field turbidimeters were loaned out to the Farm Bureau to allow farmers to assess their management practices for sediment reduction (10 farmers). In 2003, staff participated in five drainshed meetings facilitated by the ICFB. The purpose of these meetings included a discussion of the up and coming deadline for TMDL compliance, field MPs and how to navigate around the Farm Bureau' s website (approximately 200 farmers).		Continue current activities.
Implement 1106	SCC projects are voluntary projects involving willing landowners.	SCC	Demonstration projects involve education/outreach through stakeholder partners, such as RCD, to individual landowners, including technology transfer with Tomales Bay and Morro Bay watersheds.		Complete demonstration projects involving education/outreach through stakeholder partners, especially RCDs; Initiate additional demonstration projects involving education/outreach through stakeholder partners using Proposition 40 funding.
Implement 1109	Resource Enhancement Plans and Project Plans require monitoring or evaluation reports.	SCC	Implemented several BMP projects including projects in Tomales Bay, Monterey Bay, and the Oxnard Plain involving technology transfer to private property owners.	Funding and Project Staffing.	Continue to implement plans.

Management Measure 1H Used Oil Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 396	Determine used oil generation rates and used oil recycling needs of growers.	CIWMB	Activity Completed: determination of used oil generation rates and used oil recycling needs of growers.		Continue oil collection.

Coordinate 401	Nonprofit or local government works with CDFA County Agricultural Commissioner, CFB representatives and local oil distributors to establish collection program.	CIWMB	Meeting held for establishing collection programs.		Continue ongoing activities.
Plan 398	Nonprofits and county governments implemented agricultural used oil collection programs in 13 counties.	CIWMB	Implemented agricultural used oil collection programs in 13 counties.		continue oil collection.
Target 397	Establish agricultural used oil collection pump and tank centers or mobile collection programs in agricultural counties.	CIWMB	150 CA marinas currently provide used oil collection facilities to boaters and 112 marinas provide oil absorbent pad collection.		continue oil collection.

Management Measure All-A All Agriculture Measures

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 1027	Approve two million dollars for Resource Conservation District watershed coordinator grants to assess implementing watershed protection needs.	DOC	78 applications submitted for review. 30 grants awarded for 15-month period. Additional $1.25 million obtained from CALFED to extend 18 of the original 30 grants an additional 18 months.	Lost general fund support. Program reliant on bond funding.	Continue ongoing activities.
Implement 1028	Approve grants for supporting Resource Conservation District activities and projects.	DOC	The Resource Conservation District Assistance Grant Program resulted in over 50 grants being awarded over seven years. Grant projects ranged from assisting with the purchase of office equipment to establishing fire breaks and fuel reduction zones.	Funding for Resource Conservation District Assistance Grant program not in governor' s proposed budget for FY 03-04.	Continue ongoing activities.
Implement 1377	Provide feedback to field units to reinforce policies, need for training of employees, etc.	DPR	Visited all districts and provided feedback to field units.		This is an ongoing duty of the Department.
Implement 1375	Review BMP package. Add and edit to reflect objectives and incorporate new strategies, methods and processes.	DPR	Lack of time and resources prevented activity completion.	There was a lack of time to review the BMP package.	
Implement 1373	Review BMP package and place on DPR server as shareware for Department resource.	DPR	BMP package available on system.		Continue ongoing activities.

Section II
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Implement 1370	Produce BMP package and distribute to field units.	DPR	BMP package completed and distributed to field.		Continue ongoing activities.
Implement 1378	Include NPS as topic in training sessions involving DPR employees.	DPR	Three sessions were completed each with approximately 25. Total of 75 attendance regarding NPS topics.		Continue ongoing activities.
Implement 328	Train community members in bioassessment procedures and sedimentation issues.	RWQCB3	Participated in Morro Bay NEP outreach activities. Ranch and farm water quality plan development. Short courses.		To facilitate water quality plan development and short courses.
Track and Monitor 1381	When interacting with field units ask employees if they are aware of BMP package, DOM policy, NPS program, etc.	DPR	No Progress.	This activity was not done due to a lack of time and resources.	

SECTION III
PROGRESS DISCUSSION
FORESTRY CATEGORY
July 2001-June 2003

A. INTRODUCTION

Forestry activities that can impact water quality, if not carefully managed, include timber harvesting, forest road construction and maintenance, forest regeneration, fire management and other necessary silviculture activities. Waste products from forest land uses that have a potential to impact water quality, include earthen materials such as soil, silt, sand, clay, rock; and organic materials such as slash, sawdust, bark; and chemicals such as silviculture pesticides, and equipment petroleum products. Removal of riparian vegetation leads to increased erosion and higher water temperatures detrimental and sometimes lethal to fishery resources.

The Forestry Land Use Category, and the twelve Forestry MMs, as listed below, were developed to address water quality stressors that result from forestry practices and other activities that take place on forested lands. For each MM listed there are specific, potential methods or management practices (MPs) to control nonpoint sources of pollution. The MPs include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures which can be applied before, during and after pollution-producing activities in order to reduce or eliminate the introduction of pollutants into waters of the State. The basic references for these MPs are provided in California's NPS Program Plan, the California Public Resources Code (PRC), Z'Berg- Nejedly Forest Practice Act, the California Forest Practice Rules and RWQCB forestry waivers.

The activities that the IACC developed since 1998 with respect to the Forestry Category are tabulated in the Activity Summary Table of this Section. These activities, as they relate to the Forestry MMs have been scored, in an effort to describe the level of completeness with which each MM was addressed. Scoring included an identification of each activity as being 'Complete', 'Partially Complete', or 'Not Performed'. A summation of these activity scores is provided in Table IIIA, below.

TABLE IIIA
TALLY OF ACTIVITIES ADDRESSING
FORESTRY CATEGORY MMs

	Completion Status			**Total**
FORESTRY MANAAGEMENT MEASURES				
Activities Addressing All Categories	56	40	20	**116**
Activities Addressing All Forestry MMs	7	15	4	**26**
A. Preharvest Planning		6	1	**7**
B. Streamside Management Areas				**0**
C. Road Construction/Reconstruction				**0**
D. Road Management		2		**2**
E. Timber Harvesting	1	2		**3**
F. Site Preparation/Forest Regeneration		1		**1**
G. Fire Management		2		**2**
H. Revegetation of Disturbed Areas		2		**2**
I. Forest Chemical Management	1	1		**2**
J. Wetlands Forest				**0**
K. Postharvest Evaluation				**0**
L. Education/Outreach				**0**
Forestry Totals:	**65**	**71**	**25**	**161**

In general, 61, out of 161 (or approximately 40%), of the listed activities were completed for the NPS Program. About 84% of the listed activities were either partially or completely accomplished. What these statistics tells us with respect to the completeness of MM implementation, and its affect on beneficial uses and water quality remains undefined. This inability to effectively determine the level of completeness of MM implementation is being addressed through the MM Tracking Project, which is being developed in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

A. FORESTRY CATEGORY OBJECTIVES

Beginning in June of 2002, the SWRCB, CDF and other IACC agencies began the process of identifying objectives that would facilitate the process of success evaluation at the end of the period of implementation. These objectives were also intended to encompass the activities that agencies have been conducting since 1998. The IACC agencies have varying authorities and interests as they pertain to Forestry, and agency-specific restrictions on funding and other resources that enable or discourage the development of new activities related to NPS pollution prevention. The objectives that were developed are intended to be realistic to the limitations of time and resources, yet lead toward the ultimate goal of full Forestry MM implementation. The new objectives (2003-2008) are listed below:

a. Reduce the interagency conflict, as exhibited by relative number of non-concurrences regarding recommended mitigations and/or monitoring through development of appropriate MOUs or MAAs.
b. Develop or improve upon an effective, reliable, accepted approach for directly evaluating Cumulative Watershed Effects (CWE) for Forest Management activities.
c. Develop and improve interagency understanding of, and collaboration with, respective agency roles and responsibilities for water quality related to timber operations.
d. Develop and implement watershed-based plans, including TMDLs in 303(d) listed watersheds in order to identify and address impacts from forestry land uses.
e. Increase the coordination of information and data-gathering and sharing in the various involved agencies in order to enhance CWE evaluations and other assessments used for Forestry-related activities.
f. Encourage the coordination of NPS Programs on all forest lands, including federal lands, in California.
g. Provide educational opportunities for THP reviewers, foresters, pesticide regulators, and other forest management parties that will address water quality and environmental protection.
h. Continue to conduct effectiveness evaluations of forestry management practices with respect to protection of water quality.

The activities that are listed in the Activity Summary Table of this Section, and their scores, have also been correlated to the new Forestry Category Objectives. The summation of these activities and their completion status is provided in Table IIIB below.

TABLE IIIB
TALLY OF ACTIVITIES
ADDRESSING FUTURE
FORESTRY CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
2. Forestry	**Forestry Activity Tallies**		
a) Reduce the interagency conflict regarding recommended mitigations through development of a Monitoring Agreement MOU.	0	0	0
b) Develop or improve upon an effective, practical and accepted approach for directly evaluating Cumulative Watershed Effects (CWE) for Forest Management Activities.	0	0	0
c) Develop and improve interagency understanding and collaboration of their respective roles and responsibilities for water quality, related to timber operations.	5	14	4
d) Develop and implement watershed-based plans, including TMDL' s in order to identify and address land-use impacts including those from forestry practices.	1	8	1
e) Encourage the implementation of NPS Management Measures on all forest lands in California, including federal lands.	4	19	4
f) Provide educational opportunities for THP reviewers, foresters, pesticide regulators, and other forest management parties that will address water quality and environmental protection.	0	1	0
g) Continue to develop and conduct effectiveness evaluations of forestry management practices with respect to protection of water quality.	2	4	0
Total Forestry:	**12**	**46**	**9**

B. ISSUES AND CHALLENGES

Full implementation of the NPS Forestry MMs, and resulting full protection of water quality in waters impacted by timber management activities, face many deep and difficult challenges. These include issues of severe State budget shortages, legal challenges to forestry regulations, and, primarily, differing views and perceptions between state and regional water boards, the BOF/ CDF, and environmental groups. Critical issues such as forestry waivers, 303(d) listings and TMDLs for forestry-impacted waterways, and issues related to the authority of the SWRCB/RWQCBs versus that of the BOF are the subject of strong and differing opinions regarding water quality management.

Additionally, a large proportion of California's forested lands are owned or regulated by the federal government. The California Forest Practice Rules do not apply to federal lands, but State and Regional Water Board authority with respect to water quality and beneficial uses pursuant to the Porter Cologne Water Quality Act place primary responsibility for protecting waters of the State on the SWRCB and the RWQCBs. It is fair to say that protection of beneficial uses on national forest lands in California remains an area that requires clarification. In the coming months the SWRCB with the help of U.S. EPA will be taking actions to incorporate federal agencies into the State's NPS pollution prevention framework, including concurrence with the NPS program's goals and objectives.

Some of the activities that have taken place with respect to NPS pollution prevention have been affected by the issues and challenges mentioned above. Others, specifically those related to collaboration efforts, are the direct result of the acknowledged difference in interests and viewpoints between varying stakeholders and their constituencies. There are still other, although fewer activities that take place, independent of the tug and pull of the political arena.

The section below provides details on activities that occurred in the Forestry Category of the NPS Program since 1998; the Activity Summary Table is also provided.

D. FORESTRY TOPICS FOR DISCUSSION

The three activity types that are discussed below include specific monitoring programs for water quality undertaken by California Department of Pesticide Regulation (CDPR), two monitoring and BMP-effectiveness monitoring projects by the CDF, and some examples of the Statewide efforts at interagency and stakeholder involvement in forest management issues.

1. Studies On Surface Water from Forestry Pesticides

Forest pesticide use is regulated by CDPR. From 1998 through May, 2000, the CDPR undertook a water sampling and analysis project designed to monitor the occurrence of the forestry pesticides atrazine, triclopyr, glyphosate, and 2,4-D in selected creeks of the Klamath River watershed. This study was initiated in conjunction with the USEPA and the Yurok Tribe in order address tribal concerns about the potential presence of herbicide residues in surface water. Tribal people live adjacent to land owned by a timber company that uses herbicides for forestry management. Additionally, results of the study produced information regarding the results of using (or failing to use appropriate chemical management practices. An in-depth interpretation of the data will be provided in a final report, which is anticipated to be released at a later date. Evaluation of the MPs that were taking place in the study area, if conducted, will provide valuable information regarding forestry MP effectiveness.

2. Monitoring Study Group

The CDF Monitoring Study Group has two major components; the Hillslope Monitoring Program and the Modified Completion Report. These programs are discussed below:

a. Hillslope Monitoring Program (HMP)

The CDF Hillslope Monitoring Program, which has been operating since 1996 is intended to evaluate the implementation and effectiveness of Forest Practice Rules (FPRs) for a statewide random sample of 50 completed timber harvest plans (THPs) that have over-wintered from one to four years. Over-wintering provides the opportunity for erosion control measures to be wet-weather tested, allowing CDF and BOF to evaluate the effectiveness of specific measures in the field. Due to budgetary constraints, only a fraction of completed THPs are evaluated, but a random sample design improves the potential for the results to be representative of similar THPs harvested under the same conditions.

b. Modified Completion Report (MCR)

The MCR was a monitoring component added by CDF to evaluate implementation and effectiveness of FPRs designed to protect water quality. The goal of MCR monitoring is for CDF's own Forest Practice Inspectors to monitor a random selection of all completed THPs (Timber harvest Plans) for implementation and effectiveness of the FPRs related to water quality protection. This is in addition to the Forest Practice Inspectors primary mission which is to inspect and enforce FPRs and special mitigations included in every THP. For each THP evaluated under this program, a randomly selected road segment, WLPZ segment, and two watercourse crossings are rated for FPR implementation at the time logging is completed. Effectiveness of erosion control facilities and crossing design and construction are rated a second time for the same road segment and crossings during an Erosion Control Maintenance inspection after one to three over-wintering periods. In the near future, this monitoring process will provide data that will complement the more detailed information supplied by the HMP.

c. Monitoring Study Group Findings

According to CDF, the data collected as part of the HMP from 1996 through 1998 show that roads and their associated crossings had the greatest potential for sediment delivery to watercourses. Problems were identified at about 40% of the evaluated crossings. The majority of these crossings were existing structures that were in place prior to the development of the THP, and many of the problems were related to maintenance issues. Common deficiencies included fill slope erosion, culvert plugging, scour at the outlet, and stream diversion potential. A substantial percentage of road-related rule requirements also had poor implementation ratings, but generally had less impact on water quality than poorly implemented crossing FPRs.

Road rules most frequently cited for poor implementation were waterbreak spacing and the size number and location of drainage structures. A more thorough inspection of crossings by CDF Forest Practice Inspectors has been suggested. Overall, erosion problems related to timber operations were almost always associated with improperly implemented FPR requirements (CSBOF 1999). These conclusions were similar to those reached in the earlier 100 THPs audit (CSWRCB 1987).

3. Development of Collaboration Processes

a. Memorandum of Understanding (MOU) on Forestry Issues

In recognition of the cultural differences between the SWRCB, RWQCBs, and CDF/ BOF, an effort to develop an MOU was undertaken. The MOU takes into consideration the responsibilities of the CDF and BOF pursuant to the Z'berg-Nejedly Forest Practice Act, and those of the water boards pursuant to the Porter Cologne Water Quality Control Act and the federal Clean Water Act. By June of 2003, the SWRCB, CDF, and RWQCBs 1,3,5 and 6 (North Coast, Central Coast, Central Valley and Lahonta)n signed an MOU which included agreements regarding the following issues:

- Application of CEQA to the Timber Harvest Document Review Process,
- Use of Water Quality Standards and Basin Plans requirements in Review of THPs,
- Monitoring of Water Quality Conditions that may affect Water Quality,
- Coordination and Conflict Resolution Process, and
- Staff Coordination and Training

The agencies further agreed to re-evaluate the effectiveness of the agreement in 2004 and consult with each other regarding needed revisions to the Management Agency Agreement that had been signed by CDF/BOF and the SWRCB in 1988.

b. Participation in IACC

Since the IACC was established in 2001, the water board agencies (SWRCB and RWQCBs), CDF, Department of Pesticide Regulation, Fish and Game and other agencies(are there others?) that are key stakeholders in Forest Management issues, have participated fully in the discussions that took place several times per year. Additionally, these agencies and the IACC participated in the collaborative process involved in developing California's NPS 5-Year Implementation Plan, which was submitted in draft form to USEPA and NOAA in June of 2003. The next steps for the IACC will include development of collaborative processes in pursuit of MM implementation.

C. North Coast Watershed Assessment Program

In budget year 2000-2001, the Resources Agency, California Department of Fish and Game, CDF, DOC, SWRCB, and DWR were jointly funded to undertake the North Coast Watershed Assessment Program (NCWAP). It was a $7 million/year program to provide essential information to both

landowners and community groups which, if fully implemented over time, would assist in processing timber harvest plans and targeting restoration and easement program dollars.

The NCWAP was an exemplary effort that built upon the State-wide acknowledgement that a coordinated effort among State and federal agencies in addition to other partners is necessary to address watershed issues and to take an ecosystem approach to resolving environmental issues. These efforts all stand to benefit from a common definition of terms related to watershed planning and assessment.

In February of 2002, completed watershed assessments for the Gualala River, Redwood Creek and the Mattole River were released in draft form by the agencies involved. It was an achievement that had incorporated landowners, watershed groups, and local and federal agencies throughout the assessment process. Unfortunately, due to California's budgetary crises , the NCWAP was de-funded in 2003.

E. NEXT STEPS

The Five-Year Plan for Forestry provides structure to help address NPS pollution in forested lands. It is anticipated that continuation of the many efforts to address collaboration, such as the MOU between SWRCB, RWQCBs, CDF/BOF and the interagency effort of the IACC will improve the chances for improved relations and greater water quality protection. Other activities that will be key to the ability of the NPS Program to evaluate program effectiveness in forested lands depend upon the development of monitoring and MM tracking activities that build upon the information currently available. This process will be actively addressed through the Forestry Subcommittee of the IACC, and through the SWRCB Surface Water Monitoring Program (SWAMP).

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Forestry

Management Measure 2A Preharvest Planning

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 32	Identify landslides, erosion and sedimentation in areas of proposed timber harvesting.	DOC	The due date has a mandated time frame. The actual due date is 10 days following each field inspection. During FY 2001/02, the General Funds for this activity were reduced by $54,000. During FY 2002/03 General Funds were reduced another $10,000. Reductions in funding resulted in allocation of 0.5 PY to other projects. This resulted in reduction of a number of THPs that could be reviewed in the field by about 25 THPs.	Continued reduction of General Fund.	California Geological Survey will continue work as funding allows. A fee-based program is being considered under Senate Bill 557.
Assess 33	Map known landslides and areas of potential slope failure and erosion for priority watersheds.	DOC	First set of maps originally due December 2001 were completed December 2002. Funding to be determined and will depend on size of area.	Project funds were cut in FY 2001/02 by $350,000. This resulted in limitations in scope of work; I.e. Reduction of field visits, loss of 2.0 PY, reduced number of aerial photos analyzed. Funding terminated as of July 1, 2003; Restoration grant money (Prop. 13 and 40) is not available to State Agencies.	California Geological Survey will continue work on a limited basis as funding allows.
Plan 111	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from preharvest planning forestry practices.	RWQCB1	Numerous Timber Harvest Plans reviewed, water quality recommendations made.	Limited by resources.	Insert water quality effectiveness monitoring is necessary for forestry MMs.
Plan 112	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from pre-harvest planning forestry practices.	RWQCB3	Continued participation on pre-harvest inspection. Water Quality monitoring required for some sites. Waivers were issued.	Limited resources, difficulty in scheduling preharvest inspection.	Continue pre-harvest inspection participation. Increase post-harvest inspections.

Plan 113	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from preharvest planning forestry practices.	RWQCB5	A new categorical waiver for timber operations was developed in 2003, as a first step.	Public confusion regarding the waiver caused delays in the process, as well as numerous legal challenges.	Revisions to the waiver are to be made.
Plan 114	Determine Best Management Practices (BMP) for reducing and controlling NPS pollution from preharvest planning forestry practices.	RWQCB6	A new categorical waiver for timber operations was developed and adopted by the Regional Board.	Limited resources and legal challenges.	Continue ongoing activities to address legal challenges and implement the waiver.
Track and Monitor 105	Review of Timber Harvest Plans (THPs), conduct preharvest inspections (PHIs).	RWQCB5	THPs and PHIs are conducted when feasible.	Resource limitations.	Continue review of Timber Harvest Plans and PHIs.

Management Measure 2D Road Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Pre-Implement 1320	Review of additional issues surrounding Roads and Landings.	SWRCB	An issue that evolved from the Endangered Species Act considerations was the issue that roads and landings need to be looked at overall for forest practices, not just where endangered species exist. The SWRCB with an Interagency group has prepared a package of proposed statewide rules on sediment reduction from roads, trails, landings and skid trails.	This package is still in its early stages of development and considerable challenge to it is expected.	Continue current activities.
Plan 1396	Survey forest roads and determine their utility for continued use.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.

Management Measure 2E Timber Harvesting

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 58	Include DOC as a member of the Timber Harvest Plans (THP) interagency review team.	DOC	DOC is now a member of THP reviews, effective July 2000.	None.	None.

Plan 55	Recommend mitigation measures for landslides, erosion and sedimentation in areas of proposed timber harvesting.	DOC	The due date has a mandated time frame. The actual due date is 10 days following each filed inspection. During FY 2001/02, the General Funds for this activity were reduced by $54,000. During FY 2002/03 General Funds were reduced another $10,000. Reductions in funding resulted in allocation of 0.5 PY to other projects. This resulted in reduction of a number of THPs that could be reviewed in the field by about 25 THPs.	Continued reduction of General Fund.	California Geological Survey will continue work as funding allows. A fee-based program is being considered under Senate Bill 557.
Plan 1397	Survey skidtrail locations, drainages, residual debris and petroleum product residue to determine the need to implement MPs for reducing and controlling NPS pollution from timber harvesting forestry practices.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.

Management Measure 2F Site Preparation/Forest Regeneration

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 1398	Survey, map, and prepare restoration plans for areas where forest regeneration is important in protecting water quality from disturbed water soils.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.

Management Measure 2G Fire Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 1399	Survey, map, and prepare prescribed fire plans for areas where prescribed fire is important in protecting soils and forest plant communities.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.

Implement 66	Divert mechanically thinned forest residuals to existing biomass-to-energy facilities and to new technologies that can yield energy, ethanol, industrial solvents, and other products.	CIWMB	CIWMB awarded contracts to begin projects. CIWMB developed Request For Proposals to research feasibility of converting organic materials to energy, ethanol, solvents, and other products.		Contractors will begin projects in 2003.

Management Measure 2H Revegetation of Disturbed Areas

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 1401	Survey, map and prepare vegetation management plans for areas where chemical use is important in restoring native forest plant communities.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.
Plan 1400	Survey, map, and prepare revegetation plans for disturbed areas where natural forest cover is important in protecting soils and to restoring forest plant communities.	DPR	3 Watersheds are reviewed per FY, focusing on coastal waters. Assessment and identification of State Park System lands impacted or influenced by road management forestry practices where road management practices can reduce NPS pollution.	None.	Continue ongoing activities.

Management Measure 2I Forest Chemical Management

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 65	Assess exposure of native Americans to pesticides used in forestry, including determining environmental fate, off-site movement, and residues of pesticides.	CDPR	Studies completed, reports issued.		
Track and Monitor 67	Monitor effects of hand application herbicides on surface water.	RWQCB1	Some monitoring of receiving waters below herbicide application areas has occurred. Results have been inconclusive.	Roadblocks are time, resources, and the need for a comprehensive monitoring program.	Further sampling as resources allow.

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure All-F All Forestry Measures

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Pre-Implement 1322	Development of a Memorandum of Understanding between the SWRCB, the CDF, BOF, and RWQCBs.	SWRCB	The MOU was ultimately completed and signed by the CDF/BOF and the SWRCB and RWQCBs in Spring of 2003.	Developing consensus on the MOU terms. Provided some challenge.	Implement MOU.
Pre-Implement 1321	Review of current forestry reform legislation regarding general funded positions, and other bill analyses.	SWRCB	The reform legislation will replace all general funded forestry positions with fee-funded positions based on a 1/2 percent surcharge on sale of timber products. This is expected to pass with little challenge.	Limited resources to implement legislation.	Continue current activities.
Assess 53	Prepare and adopt watershed assessment and MP for Jackson Demonstration State Forest (JDSF).	CDF	JDSF Management Plan was prepared and adopted.	Pending Litigation on the MP and EIR.	Continue ongoing activities.
Assess 34	SCC develops measures to reduce impacts of forestry on coastal wetlands and riparian areas, including areas disturbed by past forestry practices.	SCC	Major forestry projects in Klamath, Mattole, Big River, and Navarro River watersheds involve developing impact assessment.	Project staffing.	Complete current assessments; initiate new assessments; Program Proposition 40 funds.
Plan 44	Review the following issues and prepare recommendations that amend Forest Practice Rules: Watersheds with Endangered Species Act (ESA) or CWA §303(d) listings, Mass wasting, Cumulative effects, Scientific validity of rules for protection of ESA-listed salmonids, Methodology for watershed assessment and cumulative effects assessment.	CDF	Additional FPRs adopted. Some existing FPRs amended.	None.	
Plan 45	Review the following issues and prepare recommendations that amend Forest Practice Rules: Watersheds with Endangered Species Act (ESA) or CWA §303(d) listings, Mass wasting, Cumulative effects, Scientific validity of rules for protection of ESA-listed salmonids, Methodology for watershed assessment and cumulative effects assessment.	DOC	Actual start date of activity was 1999. Sunset of Senate Bill 271 in December 2002 precluded funding of California Geological Survey in 2003. Other funds are being explored.	Funding terminated as of July 1, 2003; Restoration grant money (Prop. 13 and 40) is not available to State Agencies.	Funding has been terminated, therefore, California Geological Survey projects will be continued under new funding source through interagency agreements with Department of Parks and Recreation (DPR).

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 40	Review the following issues and prepare recommendations that amend Forest Practice Rules: Watersheds with Endangered Species Act (ESA) or CWA §303(d) listings, Mass wasting, Cumulative effects, Scientific validity of rules for protection of ESA-listed salmonids, etc.	RWQCB1	Provide input on proposed rule packages. Attend BOF and other meetings to provide water quality-related comments. Comments and input on rule packages.	Resources, and differing agency missions are the major roadblocks.	
Plan 49	Propose FPR amendments addressing waters under §303(d)-list or with TMDL implementation plan.	RWQCB3	Sediment TMDL adopted for San Lorenzo River.	Limited resources.	Increase outreach to road owner and timber land owner, solicit grant funding for road improvements.
Plan 41	Review the following issues and prepare recommendations that amend Forest Practice Rules: Watersheds with Endangered Species Act (ESA) or CWA §303(d) listings, Mass wasting, Cumulative effects, Scientific validity of rules for protection of ESA-listed salmonids, etc.	RWQCB3	Comments on FPRs were proposed. Some changes made to FPR (e.g., Threatened and Impaired Rules).	Resource limitations. Conflicts between agencies. Resistance from timber industries.	Continue commenting on Forest Practice Rules.
Plan 50	Propose FPR amendments addressing waters under §303(d)-list or with TMDL implementation plan.	RWQCB5	Proposals remain in circulation with the Board of Forestry.		Attend BOF meetings and roundtable conferences to discuss.
Plan 43	Review the following issues and prepare recommendations that amend Forest Practice Rules: Watersheds with Endangered Species Act (ESA) or CWA §303(d) listings, Mass wasting, Cumulative effects, Scientific validity of rules for protection of ESA-listed salmonids, Methodology for watershed assessment and cumulative effects assessment.	RWQCB6	Staff researched and reviewed proposed USFS pesticide uses.	Limited resources.	Continue activities.
Plan 51	Propose FPR amendments addressing waters under §303(d)-list or with TMDL implementation plan.	RWQCB6	Staff coordinated with other Regions and the SWRCB in Statewide forestry issues.	Limited resources.	Participate in relevant meetings.

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 56	Preparation of Resource Enhancement Plans and Watershed Restoration Plans.	SCC	Major north coast watershed plans address forestry impacts, including Lower Klamath River Watershed, Upper Mattole River watershed, as well as Big River, Noyo and Navarro River watershed projects.	Funding and Project Staffing.	Complete current plans; Initiate new plans; Program Proposition 40 funds.
Plan 1323	Review the following issues and prepare recommendations that amend Forest Practice Rules for Watersheds with Endangered Species Act (ESA), and scientific validity of rules for protection of ESA-listed salmonids.	SWRCB	The ESA was adopted as an interim package with a one-year lifetime, which has been extended in one-year increments. The CDF and Timber industry recommended the packages, the BOF has adopted them, and is currently considering making them permanent. The ESA-listed salmonids study has been completed, and was a major part of the changes that were made in the ESA, and in the 1999 Forest Practice Rules package.	Limitations of SWRCB resources, and conflicting interests of stakeholders.	Continue ongoing activities.
Plan 47	Propose FPR amendments addressing waters under §303(d)-list or with TMDL or implementation plan.	SWRCB	The 1999 Forest Practice Rules Package prepared for BOF, although it has never been accepted in its completeness. Parts are being accepted piece-meal. Most of the accepted amendments are TMDL-related.	Conflicting interests of stake-holders.	Continue current activities.
Plan 1325	Review the following issues and prepare recommendations that amend Forest Practice Rules for Mass wasting, Cumulative effects, and Methodology for watershed assessment and cumulative effects assessment.	SWRCB	Recommendations have been made for Mass-wasting, but they continue to be blocked by the State Board of Registered Geologists and Physicists, who consider this to be an infringement on the activities that should be managed through registered professional geologists. The Cumulative Effects rules have been proposed, adopted and implemented. Methodologies for watershed assessment and various other proposals have been prepared and recommended, but none have been adopted.	Limitations of SWRCB resources, and conflicting interests of stakeholders.	Continue ongoing activities.
Plan 1324	Review the following issues and prepare recommendations that amend Forest Practice Rules for CWA §303(d) listings.	SWRCB	The CWA §303(d) listings were prepared and recommended, and some of them have been adopted by the BOF as interim rules. They are up for consideration as permanent rules. There has been no implementation of this as of yet.	Limitations of SWRCB resources, and conflicting interests of stakeholders.	Continue ongoing activities.

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Target 35	Develop TMDLs for CWA §303(d) - listed waters impaired by silvicultural activities.	RWQCB1	TMDL preparation underway for several Region 1 listed waters, including 2 watersheds specifically designated "cumulatively significantly adversely impacted due to sediment with timber harvest a contributing factor."	Resources will dictate progress on these efforts.	Continue with TMDL development.
Target 36	Develop TMDLs for CWA §303(d) - listed waters impaired by silvicultural activities.	RWQCB3	TMDL adopted by Regional Board 3 for San Lorenzo River and Morro Bay.		Continue as described in TMDL Project Tracking Tool.
Target 38	Develop TMDLs for CWA §303(d) - listed waters impaired by silvicultural activities.	RWQCB6	Staff is developing TMDLs for impaired waters.		Continue ongoing activies.
Implement 63	Prepare budget for additional State agency staff to implement and enforce FPR.	CDF	Annual budget is prepared. Additional inspectors and staff have been hired.	None.	Prepare budget annually.
Implement 60	Support legislation giving CDF civil administrative authority and substantial penalties to enforce FPR.	CDF	Public Resources Code (PRC) 4601.2 adopted.	None. PRC change is working effectively.	Continue utilizing new authorities.
Implement 62	Implement watershed assessment and MP for Jackson State Forest.	CDF	Implementation underway.	Pending Litigation on the MP and EIR.	Continue implementation, where possible.
Implement 59	Support legislation giving CDF civil administrative authority and substantial penalties to enforce Forest Practice Rules.	SWRCB	This legislation was supported by SWRCB and the BOF, and was passed into law, giving the CDF more than criminal authority to regulate Forest Practice Rules. They now have civil administrative authorities and can issue penalties and fines.		Activity completed.
Implement 64	Prepare budget for additional State agency staff to implement and enforce Forest Practice Rules.	SWRCB	This activity is conducted annually by the SWRCB for the SWRCB and the RWQCBs. Requests for increases in staffing levels and other budget supplements have been denied with the exception of a one-time expansion of PYs for the RWQCB 1.	Limited Resources.	Continue Current Activities.

Section III
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Track and Monitor 106	Develop and implement components for: (1) administrative and (2) repeated monitoring.	CDF	Forest Practice Inspection Program operating, five years of Hillslope Monitoring completed, Modified Completion Report Monitoring instituted, Cooperative Instream Monitoring Program initiated.	None.	Continue ongoing activities.

SECTION IV
PROGRESS DISCUSSION
URBAN CATEGORY
July 2001 – June 2003

NOTE: *With the enactment of the Phase I and Phase II Stormwater Programs, many of the activities that formerly occurred under the authorities of the NPS Program, are no longer be subject to the requirements of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) Section 6217 Coastal Nonpoint Pollution Control Program. These activities are now regulated as point sources, subject to the National Pollution Discharge Elimination System (NPDES) Program, as indicated in a recent communication from USEPA and NOAA. A copy of this communication can be found at: http://www.ocrm.nos.noaa.gov/pdf/NPDES_CZARA_Policy_Memo.pdf Because this clarification occurred subsequent to the development of many of the activities listed in this report, the activity progress is nonetheless described here. The fact that these activities listed under SWRCB or RWQCB agencies are described in this report and were part of the NPS Program does not have any effect on their current legal and regulatory status as point source discharges. This distinction between Urban NPS and Stormwater NPDES does not apply to other IACC agencies, such as the CIWMB or the SFBCDC, who continue to plan NPS activities in urbanized areas under their own authorities.*

A. INTRODUCTION

The Urban Category of the NPS Program has addressed water quality impacts from urbanized areas, including industrial zones, municipal communities, and transportation systems. Pollutants from urbanized areas that are absorbed by runoff water that is eventually discharged to waters of the State. Whether it comes from rain, car washing or landscape irrigation, this runoff water intercepts and mobilizes an array of contaminants that it encounters along the way. These contaminants include oil, sand, de-icing chemicals, litter, bacteria, nutrients, toxic materials and general debris from urban and suburban areas. Construction is a major source of sediment erosion. Petroleum hydrocarbons result mostly from automobile sources. Among the contaminants are artifacts of every day living, such as pesticides, garden fertilizers, yard waste, and animal waste. Faulty septic systems can also lead to groundwater and surface water contamination with nutrients, sediment, and pathogens. As populations increase, the potential for increase in pollutant loads in urban runoff also increases, and this runoff will eventually find its way into waterways, either directly or through constructed storm drain diversions.

The Urban Land Use MMs, as listed in Table IVA below, have been used to address urban sources of pollution. The MMs emphasize pollution prevention and source reduction practices over treatment practices, as the most cost-effective means of controlling urban runoff pollution.

The activities that the IACC has developed since 1998 in the Urban Category are tabulated in the Activity Summary Table of this Section. These activities have been scored, in an effort to describe the level of completeness to which each MM was addressed. The scoring included an identification of each activity as being 'Complete', 'Partially Complete', or 'Not Performed'. A summation of these activity scores is provided in Table IVA, below.

TABLE IVA
TALLY OF ACTIVITIES ADDRESSING
URBAN CATEGORY MMs

	Completion Status			Total
MANAGEMENT MEASURES	**Complete**	**Partial**	**Not Performed**	
3. Urban Areas				
Activities addressing all Categories	56	40	20	**116**
Activities addressing all Urban MMs	12	9	4	**25**
3.1 Runoff from Developing Areas	1			**1**
A. Watershed Protection	1			**1**
B. Site Development	1		1	**2**
C. New Development	1			**1**
3.2 Runoff from Construction Sites				**0**
A. Construction Site Erosion and Sediment Control				**0**
B. Construction Site Chemical Control				**0**
3.3 Runoff from Existing Development	5	1		**6**
A. Existing Development	2	3		**5**
3.4 On-Site Disposal Systems	3			**3**
A. New On-Site Disposal Systems	1	8	4	**13**
B. Operating On-Site Disposal Systems	5	1	3	**9**
3.5 Transportation Development (Roads, Highways, and Bridges	1			**1**
A. Planning, Siting, and Developing Roads and Highways		1		**1**
B. Bridges				**0**
C. Construction Projects				**0**
D. Chemical control				**0**
E. Operation and Maintenance				**0**
F. Road, Highway, and Bridge Runoff Systems	1		1	**2**
3.6 Education/Outreach		2		**2**
A. Pollution Prevention/Education: General Sources	31	6	2	**39**
Urban Totals:	**121**	**71**	**35**	**227**

In general it can be said that 121 out of 227 (or approximately 53%) of the listed activities were completed for the NPS Program. Furthermore, about 85% of the listed activities were either partially or complete accomplished. What these statistics tells us with respect to the completeness of MM implementation, and its affect on beneficial uses and water quality remains undefined. This inability to effectively determine the level of completeness of MM implementation is something that is being addressed through the MM Tracking Project, which is currently taking place in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

With the enactment of the Phase I and Phase II Stormwater Programs many of the activities that formerly occurred under the authorities of the NPS Program are no longer be subject to the requirements of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA)

Section 6217 Coastal Nonpoint Pollution Control Program. These activities are now regulated as point sources, subject to the National Pollution Discharge Elimination System (NPDES) Program. The fact that these activities listed under SWRCB or RWQCB agencies are described in this report and were part of the NPS Program does not have any effect on their current legal and regulatory status as point source discharges. This distinction between Urban NPS and Stormwater NPDES does not apply to other IACC agencies, such as the CIWMB or the SFBCDC, who continue to plan and perform NPS activities in urbanized areas under their own authorities.

B. URBAN CATEGORY OBJECTIVES

Beginning in June of 2002, the IACC agencies initiated the process of identifying Urban Category Objectives that would not only address future planning efforts, but also would also include the activities that agencies have been conducting since 1998. The objectives that were developed are intended to be realistic to the limitations of time and resources, while at the same time, lead toward the ultimate goal of full Urban MM implementation. These objectives are listed below:

a. Coordinate with the SWRCB and RWQCB TMDL staff and managers to include NPS MMs in the TMDL Implementation Plans, as appropriate.

b. Promote coordination of interagency programs that protect water quality from urban runoff pollution.

c. Through the implementation of MMs, reduce the potential for contamination of surface and groundwater that results from uncontrolled or poorly controlled urban runoff practices.

d. Develop tools to assess the effectiveness of urban water pollution programs

e. Increase the availability of regulatory and guidance documents and/or instructional workshops to demonstrate effective urban pollution control programs and policies.

f. Reduce the number of uncontrolled NPS pollution sources by increasing the effectiveness of the State Stormwater Program.

g. Develop and implement watershed-based plans, including TMDLs, in order to identify and address impacts from urban land use.

With the enactment of the Phase I and Phase II Stormwater Programs, many of the activities that formerly occurred under the authorities of the NPS Program, are no longer be subject to the requirements of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) Section 6217 Coastal Nonpoint Pollution Control Program. These activities are now regulated as point sources, subject to the National Pollution Discharge Elimination System (NPDES) Program. The fact that activities are described in this report and are compared to objectives in the NPS Five-Year Implementation Plan does not have any effect on their current legal and regulatory status as point source discharges. This point-source distinction does not apply to other IACC agencies, such as the CIWMB or the SFBCDC, who continue to plan and perform NPS activities in urbanized areas under their own authorities.

The activities that are listed in the Activity Summary Table of this Section, and their scores, have been correlated to the new Urban Category Objectives. The summation of these activities and their completion status is provided in Table IVB below.

TABLE IVB
TALLY OF ACTIVITIES
ADDRESSING FUTURE
URBAN CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
URBAN MANAGEMENT MEASURES	**Urban Activity Tallies**		
a) Coordinate with the SWRCB and RWQCB TMDL staff and managers to include NPS MMs in the TMDL Implementation Plans, as appropriate.	7	4	1
b) Promote coordination of interagency programs that protect water quality from urban runoff pollution.	15	8	5
c) Through the implementation of MMs, reduce the potential for contamination of surface and groundwater that results from uncontrolled or poorly controlled urban runoff practices.	3	0	0
d) Develop tools to assess the effectiveness of urban water pollution programs.	8	2	2
e) Increase the availability of regulatory and guidance documents and/or instructional workshops to demonstrate effective urban pollution control programs and policies.	35	14	7
f) Reduce the number of uncontrolled NPS pollution sources by increasing the effectiveness of the State Stormwater Program.	12	12	5
g) Support the development and implementation of watershed-based plans, including TMDLs, in order to identify and address impacts from urban land use.	5	1	0
Total Urban:	**85**	**41**	**20**

C. ISSUES AND CHALLENGES

Full implementation of the NPS MMs, and resulting protection of water quality, will be challenging. The challenges include issues of enormous increases in State urban populations, State fiscal difficulties, and the challenge of coordinating multiple agencies that share responsibility for urban runoff pollution prevention.

The State government budget woes do not effect State agencies alone. As State agencies are struggle with obtaining resources to conduct sufficient regulatory review, the local agencies, who are actually burdened with the implementation of the increasingly stringent mandates, are also struggling to do far more with less. The current trend of diminishing funds for counties and municipalities will only serve to complicate matters, unless local organizations can acquire sufficient resources through local fees or other means. Several grant programs have been available to fund specific urban pollution control projects and this may provide some relief. Examples include resources provided by Propositions 13, 40, and 50. Nevertheless, these funding sources are inadequate to address the magnitude of California's

pollution prevention necessities and other mechanisms for implementation will need to be identified. These resources concerns are expected to be a consideration for years to come.

D. URBAN TOPICS FOR DISCUSSION

The four exemplary activities discussed below represent successful implementation of selected Urban MMs, including: preventing and controlling runoff from developing areas (watershed protection); preventing and controlling runoff from existing development; and education and outreach. They include the California Integrated Waste Management Board's (CIWMB) outreach and education efforts regarding sound landscape management and used oil recycling, RWQCB-5's leadership role and participation in the Sacramento River Watershed Program, and the Department of Parks and Recreation's (DPR) litter campaign.

With the enactment of the Phase I and Phase II Stormwater Programs many of the activities that formerly occurred under the authorities of the NPS Program are no longer be subject to the requirements of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) Section 6217 Coastal Nonpoint Pollution Control Program. These activities are now regulated as point sources, subject to the National Pollution Discharge Elimination System (NPDES) Program. The fact that these activities are described in this report does not have any effect on their current legal and regulatory status as point source discharges. This point-source distinction does not apply to other IACC agencies, such as the CIWMB or the SFBCDC, who continue to plan and perform NPS activities in urbanized areas under their own authorities.

1. Landscape Management Outreach Program

The CIWMB Landscape Management Outreach Program (LMOP) has addressed urban runoff pollution by reducing the amount of green waste that ends up in municipal storm drains, or in other sites that jeopardize the quality and quantity of water. Over 30% of California' s solid waste stream consists of compostable organic materials, and much of this material is disposed of in landfills. Yard trimmings or green waste (leaves, grass clippings, weeds, branches, stumps, etc.) comprise about one half of the organic waste stream, and a large portion of green waste is generated by the professional landscape industry. The purpose of the Landscape Management Outreach Program (LMOP) is to assist professional landscapers in reducing green waste generation and disposal and to promote the use of recycled organic products in urban landscapes. The CIWMB selected LMOP partnerships in regions that generate large quantities of green waste, such as the San Francisco Bay Area, Orange, San Joaquin, Sacramento, Riverside and San Bernardino counties. The LMOP campaigns were implemented from 1999 to 2003.

Each LMOP campaign developed unique outreach activities and events to promote the goals of the program. Outreach activities included sponsoring educational seminars on compost, water efficient landscaping, Integrated Pest Management, turf management, pruning, and irrigation. Articles for green industry newsletters were developed and distributed, as well as brochures that discussed the benefits of grasscycling, composting, and alternatives to disposing green waste in landfills. Presentations on reducing green waste were given at landscape industry shows, such as the Northern California Turf and Landscape Council Expo in Santa Clara and the Southern California Turfgrass Council in Buena Park. Some LMOP

campaigns offered landscape audits to show professional landscapers the amount of green waste that was generated at various sites and to offer techniques on how to reduce green waste generation through proper irrigation, fertilization, and pruning.

Unfortunately, the CIWMB discontinued funding for LMOP in 2001. However, the CIWMB is currently implementing a pollution prevention campaign with the City of Sacramento to promote resource efficient landscaping practices to residents in North Natomas to reduce green waste, conserve water, and minimize nonpoint source pollution.

2. Used Oil Recycling

The objective of CIWMB's annual statewide Used Oil Forum is to: update grantees (local governments, nonprofits and researchers), consultants and vendors on Used Oil Recycling Grant policies and procedures and legislative changes; share successful grantee used oil collection models and public education/outreach techniques; provide grant-writing and program evaluation guidance; and provide grantees with an opportunity to network with one another and with CIWMB's used oil grant management and analysis staff.

This is a single annual conference that first started in 1996 with an aim to serve the entire state. The location usually rotates from north to south on an alternating basis so that all CA grantees can attend. Attendees fill out evaluation forms at the end of each conference. Their feedback assists Used Oil staff in determining the success of each conference, crafting future conference sessions, and improving Used Oil grant programs. Attendee response to the last Used Oil Forum held in December 2002 was very positive. All responders appreciated the full day training workshop on how to use Community-Based Social Marketing to increase used oil recycling participation.

Used Oil staff plans to continue to hold the Used Oil Forum annually. The next Used Oil Forum, to be held in March of 2004, will be combined with the annual California Household Hazardous Waste conference (which CIWMB and the Department of Toxic Substance Control jointly sponsor) to reduce costs during the current lean budget period. This Forum has contributed to increased oil collection in California by educating grantees about new oil collection methods and marketing strategies and giving them an opportunity to network with each other and CIWMB staff.

3. Sacramento River Watershed Program

The Public Outreach and Education Subcommittee (POES) was established at the outset of the Sacramento River Watershed Program (SRWP) in 1997. The mission of this subcommittee is to facilitate the exchange of information concerning the watershed in the agriculture and urban communities and to encourage broad-based participation in the management, protection, and enhancement of the Sacramento River Watershed.

The membership includes representatives from the Department of Water Resources, Placer County Resource Conservation District, RWQCB-5, Sacramento Regional County Sanitation District, SWRCB, and community networks. The distribution list for POES information includes a much broader spectrum of interests as well.

A public relations firm has been retained to develop and maintain the public service announcement (PSA) campaign. It has secured between $85,000 and $100,000 in underwriting annually since 2001 to develop a message for their PSA. A local television news service (Channel 10) supplies production and their news anchor at no cost to the program. Currently, the program has produced 12 spots, which are being aired year-round. In addition, because fund raising for the campaign has been so successful, Channel 10 produced and airs a spot just for the overall SRWP program. This spot also was distributed to stations in the northern part of the watershed.

The SRWP coordinator also makes approximately five to ten presentations each month. The target audience includes Boards of Supervisors, watershed groups, industry groups, etc. The SRWP exhibit is displayed at approximately eight to ten events each year. Events range from county fairs, environmental fairs, salmon festivals, science conferences, SRWP events (i.e., the General Stakeholder's meeting), and other events deemed appropriate by POES. Effectiveness is measured by the number of stakeholders reached by the various outreach media.

Currently, POES is working on updating their long-term strategic communications plan and short-term workplan. However, consistent and reliable funding is crucial to ensuring the continuing success of the program. Fortunately, now that the program is an entity governed by articles of incorporation, bylaws and a Board of Trustees, many more funding opportunities have arisen.

4. Litter Getter Education Program

This program is a part of an education package developed by the Department of Parks and Recreation (DPR), which also includes the Junior Ranger Program. The current program started as a result of a grant from the California Department of Conservation in 1997.

The Litter Getter Program is just a part of the diverse information and special interest activities that are introduced to the visitor. The program focuses on recycling, which, when effectively implemented, leads to a reduction in NPS pollution. Park visitors are exposed to the concept through posters located at kiosks and visitor centers in park units throughout the state. Additionally, the program is included as an informational item at park campfire programs. The campfire programs are educational and interpretative sessions provided at the campfire centers on most of the state's units where campgrounds are located. And, as a companion program to the Junior Ranger Program, 1999 data showed the campaign reached more than 30,000 children aged seven through 12.

The Litter Getter program is designed to be a learning-by-doing clean-up effort. Children become more knowledgeable about reducing waste, the impacts of waste on parks and communities, and the role that recycling plays in improving the quality of life. An educational brochure/activity sheet is provided along with a trash bag that is used by the participant to collect litter. The activity sheet shows nature's recyclers and things that Litter Getters can do to recycle. Puzzles, stickers and drawing activities are all interactive parts of the program. Stickers can be earned by picking up trash and returning filled trash bags. Litter Getter pencils made from recycled materials are also some of the incentive awards.

E. NEXT STEPS

With the enactment of the Phase I and Phase II Stormwater Programs, many of the activities that formerly occurred under the authorities of the NPS Program, are no longer be subject to the requirements of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) Section 6217 Coastal Nonpoint Pollution Control Program. These activities are now regulated as point sources, subject to the National Pollution Discharge Elimination System (NPDES) Program.

Although the diversity of local and State agencies that manage water quality relative to urbanized communities is great, this same level of diversity offers an opportunity for comprehensive approaches to pollution control. Examples of this exist with collaborative opportunities that the NPS Program can utilize in coordination with State stormwater programs, local coastal planning, and TMDL implementation are described below.

1. State Stormwater Programs

The State Urban Category NPS Program and NPDES Storm Water Program, Phases I and II, are intricately linked in that both address aspects of runoff pollution. With respect to programs within the SWRCB and RWQCBs, urban runoff is addressed primarily through the NPDES Permitting Program as a point source discharge, although the SWRCB NPS Program will apply where the runoff is not regulated as a permitted point source discharge.

Phase I of the Storm Water Programs, defined in federal regulation in 1990, includes storm water discharges associated with "industrial" activities (as defined by the regulations), construction activities that disturb five acres of land or more, and discharges from municipal separate storm sewer systems (MS4s) serving populations of 100,000 people or more. Phase II of the Storm Water program, defined in federal regulations in 1999, expanded the program to require NPDES permits for discharges from construction sites disturbing between one and five acres, from small MS4s that serve populations of less than 100,000, from some other governmental facilities, and from industrial facilities owned by small municipalities. The expansion of the Storm Water Programs through Phase II has therefore expanded the applicability of the NPDES point source program to a greater number of communities, businesses, government facilities, and industries. The result is that most urban runoff is now subject to NPDES permits.

Phase II of the storm water NPDES program has resulted in expanding NPDES permit requirements in areas where the State's NPS Program used to provide the sole regulatory function. However, instead of creating redundancy, the additional program represents an opportunity for ensuring a thorough implementation of the urban management practices.

2. Local Coastal Planning

Another complementary program includes the planning and land-use activities of other state agencies, such as the CCC or the SFBCDC. The Coastal Act delegates to local governments specified authority to regulate coastal development. It directs each of the 73 coastal cities and counties to prepare, for review and certification by the CCC, a Local Coastal Plan (LCP) which will manage resources of state, regional, and national significance in ways that respect special circumstances in each locality. An LCP consists of a local government's land use

plans (LUPs), zoning ordinances, zoning district maps, and, within sensitive coastal resource areas, other implementing actions. The CCC works with local governments to tailor LCPs to reflect local issues and concerns while simultaneously meeting the statewide goals and policies of the Coastal Act, as well as federal CWA, including NPDES Storm Water, and other State water quality requirements. Until the CCC has certified a locality's LCP as consistent with Coastal Act requirements, the CCC is generally responsible for reviewing Coastal Development Permit (CDP) applications for development within that jurisdiction. Upon LCP certification, the local government reviews CDP applications for consistency with LCP policies.

CDPs and Certified LCPs are important tools for implementing urban runoff MMs and management practices within the Coastal Zone. The recognition that the effectiveness of the NPS Program can be enhanced by the activities with the NPDES Storm Water and Local Coastal Planning through CCC offers a comprehensive opportunity for collaboration and Statewide cooperation.

3. TMDL Implementation

The same level of coordination will also take place with the State's Total Maximum Daily Load (TMDL) program. Under Section 303(d) of the Clean Water Act, California is required to compile a list of impaired waters that fail to meet applicable water quality objectives or that cannot support their beneficial uses. This list, -- CWA 303(d) -- is submitted to Congress every two years, and California is required to develop a TMDL for each pollutant causing impairment to the water bodies that are listed.

The key steps in TMDL development include defining the problem, determining the causes of impairment, selecting appropriate numeric targets for the given pollutants, identifying sources of pollutant loading (both point source and nonpoint source), evaluating the linkage between pollutant loading and in-stream response, allocating portions of the available load to dischargers, and identifying follow-up monitoring needs. Once the TMDL has been completed, a TMDL implementation plan will be developed to remedy the impaired water body. In an urban setting, the majority of the controls are likely to be implemented through the NPDES program.

Over the next five-year period, California is planning to expend significant funds on TMDL Implementation Plan development, much of which addresses urban runoff issues. Coordination between the TMDL and NPS Program provides yet another avenue for effective NPS pollution prevention.

Many of the proposed activities will facilitate implementation of the TMDL program and achieve other significant objectives such as promoting interagency coordination on urban NPS efforts and increasing issue awareness by developing new guidance documents and instructional workshops.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Urban

Management Measure 3.1 Runoff from Developing Areas

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Track and Monitor 88	Permit tracking five-year review.	CCC	The WQ Unit has developed an Access-based database to track CDPs and LCPs reviewed by its staff. It records the nature of a project, location, staff analyst(s) involved, MMs/BMPs recommended both during and post construction, and project status. This tracking system provides an institutional memory of all WQ-related projects.	Need ongoing resources to continue to populate the database.	Continue to populate the database and improve it as necessary. The CCC staff would like to increase the number of site visits to observe permit compliance.

Management Measure 3.1A Runoff from Developing Areas - Watershed Protection

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 26	Coordinate with developer and regulatory agencies with respect to erosion standards for development.	RWQCB2	Variety of outreach and trainings for erosion control standards for developers and municipalities; development of erosion control handbook and videos.		Ongoing work with developers and municipal inspectors; staff field inspections; dissemination of manuals, videos, brochures.

Management Measure 3.1B Runoff from Developing Areas - Site Development

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 27	Work with municipalities and counties to develop appropriate grading ordinances aimed at controlling impacts from new development.	RWQCB2	This has been accomplished through work with county stormwater programs.		
Coordinate 28	Work with municipalities and counties to develop appropriate grading ordinances aimed at controling impacts from new development.	RWQCB6	Implementation through education and outreach.		Continue activities.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 3.1C Runoff from Developing Areas - New Development

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 29	Work with municipalities and counties to develop appropriate grading ordinances aimed at controlling impacts from new development.	CCC	The WQ Unit staff has been working with CCC planners to ensure that new LCPs or those being amended incorporate the up to date grading ordinance language. Examples include San Luis Obispo, Sonoma, Malibu, and Dana Point.	Some municipalities are resistant to incorporating new requirements unless they are consistent with the requirements of the RWQCBs.	Continue to work with CCC planners in reviewing LCPs. Continue to develop and revise the LCP Development Guidance.

Management Measure 3.3 Runoff from Existing Development

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 128	Collect urban pesticide use data to help develop a better understanding of residential use patterns.	CDPR	Two studies completed; reports issued.		
Assess 130	Santa Monica Bay Restoration Plan is a comprehensive plan for restoring and protecting Santa Monica Bay.	SCC	Participated with Santa Monica Bay Restoration Commission staff, Executive Committee and Watershed Council to assess needs.		Continue to participate with Santa Monica Bay Restoration Commission staff, Executive Committee, and Watershed Council to update needs assessment.
Plan 10	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB7	On-going implementation of applicable MMs into Urban TMDL development strategies and implementation plans.		Continue ongoing activities.
Implement 72	Oversee implementation of urban runoff practices in four North SF Bay counties.	RWQCB2	North Bay stormwater programs were reviewed by RWQCB staff.	Several North Bay counties have not implemented full programs.	Ongoing implementation of Phase II stormwater programs in North Bay counties.
Implement 71	Incorporate applicable MMs into NPDES permits that come up for review.	SWRCB	Four Phase I permits were issued by SWRCB since 1998. With the adoption of the MS4 permit, it is anticipated that 156 Phase II permits will be issued.		Continue adoption of MS4 permits that will include requirements at least as restrictive as the NPS MMs.
Track and Monitor 89	Monitor pathogens weekly at popular beaches with summertime urban runoff inputs.	DHS	Monitoring is conducted by county public health departments. Results are reported directly to SWRCB.	Resource limitations to follow up on possible causes of non-point source pollution identified during water system evaluations.	Continue monitoring by county health departments.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 3.3A Runoff from Existing Development - Existing Development

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 171	Identify impacts of Household Hazardous Waste and Conditionally Exempt Small Quantity Generator waste collection programs.	CIWMB	Used oil collection data has only been collected the past two years. In Fiscal Year 01/02, approximately 2600 used oil collection centers collected 9, 242,110 gallons of DIYer used oil (do-it-yourselfer oil changed by vehicle owners) . Of this total, 122,238 gallons were collected at agricultural used oil collection facilities and 25,260 gallons were collected at marinas. From FY 97/98 to FY00/01, 177,978 million pounds of household hazardous wastes were collected by CIWMB grant-funded local governments. A certain amount of Hazardous Waste was diverted by HHW but not by CESQG.	HHW quantified oil not yet identified.	Provide oil impact report.
Coordinate 25	Support the Urban Pesticide Committee (UPC) in its role in coordinating activities of the SF Bay Area and Central Valley agencies and other entities interested in OP pesticides in urban creeks.	RWQCB5	Staff is working with the UPC to coordinate their urban TMDL activities.		
Coordinate 70	Santa Monica Bay-SCC and SMBRP administer coordinated grants program.	SCC	Coordinate with Commission staff, EC, and Watershed Council.	Project staffing.	Continue to coordinate with Commission staff, EC, and Watershed Council.
Implement 80	Implement a model program at Capitol Park in Sacramento; Train and equip Department of General Services' (DGS) staff to incorporate resource-efficient landscaping practices at Capitol Park.	CIWMB	Resource-efficient landscape guidelines developed for DGS staff.	Lack of funding to expand project.	Install drip irrigation in several shrub beds and apply mulch to conserve water and reduce runoff.
Implement 77	Implement WQPP for Monterey Bay National Marine Sanctuary.	RWQCB3	Urban stormwater permit for Salinas, and others to be developed in '03-04 will ensure water quality protection or enforcement capabilities.		Develop Urban stormwater permits.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 3.4 On-Site Disposal Systems

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 168	Update Minimum Guidelines for the Control of Individual Wastewater Treatment and Disposal Systems, 1979, by including non-standard systems.	RWQCB2	Draft guidelines have been developed, circulated for public review and comment.	Limited funding and staff time available.	Need for, and content of, updated RWQCB2 guidelines and policy will depend on how statewide regulations address non-standard systems.
Plan 96	Review local OSDS-related policies and ordinances of local governments within one or more regions as submitted to the CCC.	CCC	The WQ Unit developed the OSDS policies and ordinances for the City of Malibu. This LCP was adopted by the Critical Coastal Commission in 2002.	Future OSDS policies and ordinances will largely depend on the current statewide efforts to develop consistent regulations, pursuant to AB885. These efforts are experiencing delays due to disagreements among the stakeholders. The related CEQA process has yet to begin.	The WQ Unit will continue to develop and incorporate into LCPs the most up-to-date OSDS policies.
Implement 229	Provide consultation to SWRCB on onsite sewage treatment systems.	DHS	DHS staff participated in advisory committee and provided comments for proposed new regulations.		Review future drafts of proposed regulations.

Management Measure 3.4A On-site Disposal Systems - New OSDSs

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 148	Provide assistance to local developers in achieving the state OSDS MM objectives.	RWQCB2	Activity not launched.	Limited funding and staff time available to work on this activity.	Need clarification on intended action and RWQCB2 role. Staff generally work with local health departments.
Coordinate 163	Provide technical assistance for siting new on-site systems to ensure that (1) suitable septage disposal facilities are available for existing and proposed OSDSs and (2) construction standards were met during and after installation.	RWQCB2	No RWQCB 2 work done regarding septage facilities. SWRCB contract study done in 2002. Local agencies required to inspect new installations.	Limited funding and staff time to work on this activity. Septage not identified as priority task.	These tasks should be separated out, not really related. Regional Board could survey septage facilities but unclear what authority to require. Regional Board could also evaluate local agency program regulations. Future work will depend upon funding availability.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 164	Provide technical assistance for siting new on-site systems to ensure that (1) suitable septage disposal facilities are available for existing and proposed OSDSs and (2) construction standards were met during and after installation.	RWQCB3	Compliance with Basin Plan criteria.	Inconsistent implementation by local permitting authorities.	Continue current activities.
Coordinate 150	Provide assistance to local developers in achieving the state OSDS MM objectives.	RWQCB4	Incorporate requirements in appropriate §401 Water Quality certifications.	Objectives are not clearly identified.	
Coordinate 151	Provide assistance to local developers in achieving the state OSDS MM objectives.	RWQCB6	Staff participated in interagency and public meetings in Inyo County regarding septic systems.		Continue activities
Coordinate 142	Provide technical assistance and oversite on OSDS siting and proper application of alternative technology.	RWQCB6	Staff participated in interagency and public meetings in Inyo County regarding septic systems.		Continue activities.
Coordinate 152	Provide assistance to local developers in achieving the state OSDS MM objectives.	RWQCB7	So far, Regional Board 7' s stakeholders were awarded about $6 million through the State' s Prop 13 Program for septic tank replacement.		Continue current activities.
Coordinate 166	Provide technical assistance for siting new on-site systems to ensure that (1) suitable septage disposal facilities are available for existing and proposed OSDSs and (2) construction standards were met during and after installation.	RWQCB7	RWQCB7 did participate in stakeholders meetings which were utilized during the development of standards.		
Coordinate 145	Provide technical assistance and oversite on OSDS siting and proper application of alternative technology.	RWQCB9	In San Diego County, the County is the lead for OSDS; RWQCB9 reviewed and assisted.	Limited Staff and funding	Continue ongoing activities
Coordinate 153	Provide assistance to local developers in achieving the state OSDS MM objectives.	RWQCB9	In San Diego County, County is lead for OSDS; RWQCB9 reviewed and assisted.	Limited staff and funding.	Continue ongoing activities.

Coordinate 167	Provide technical assistance for siting new on-site systems to ensure that (1) suitable septage disposal facilities are available for existing and proposed OSDSs and (2) construction standards were met during and after installation.	RWQCB9	In SD County, County is lead for OSDS SDRWQCB reviewed and assisted.	Limited staff and funding.	Continue Ongoing Activities.
Coordinate 161	Provide technical assistance for siting new on-site systems to ensure that (1) suitable septage disposal facilities are available for existing and proposed OSDSs and (2) construction standards were met during and after installation.	SWRCB	In December of 2002, a contractor to the SWRCB completed a survey of septage, handling, disposal, and treatment practices in CA. The contract also included a survey of the types of corrective actions employed in making repairs to OWTS.	Staffing and resource limitations at SWRCB have impeded progress on this task over the 5-year period.	Continue ongoing activities.
Plan 94	Establish uniform statewide standards for minimum criteria for OSDS siting and design.	SWRCB	The SWRCB is in the regulation development process. The SWRCB has conducted several stakeholder meetings and written draft regulations.	Staffing and resource limitations have impeded progress over the 5-year period.	Activities are ongoing.

Management Measure 3.4B On-site Disposal Systems - Operating OSDSs

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 92	Identify water segments impaired by OSDS.	RWQCB4	Completed.	Inclusive Monitoring, §303(d) list inclusive monitoring for septic systems (e.g. activity not a high enough priority).	Requirement after receipt of all septic locations.
Coordinate 101	Provide technical assistance and oversite on OSDS siting and proper application of alternative technology.	RWQCB2	Assistance provided on 1) about 100 individual cases, 2) updating of county regulations in four counties and one special district, 3) local program advisory committees in two counties, and 4) statewide stakeholder and TACs for statewide regulations.	Limited funding and staff time available to work on this activity. Lack of specific regulatory criteria or protocol for acceptability, approval, or proper use of OSDS alternative technologies.	Continue to provide technical assistance as needed.
Coordinate 156	Develop a uniform standard of practice for the inspection of OSDS and pumping of tanks if necessary during real estate transfers or property refinancing.	RWQCB2	Not done at regional level. A worthwhile effort to develop standardized inspection protocols and criteria for when to use the standard inspections.	Primarily a statewide task. Limited funding at regional level. Objections by real estate community to these requirements.	

Coordinate 158	Develop a uniform standard of practice for the inspection of OSDS and pumping of tanks if necessary during real estate transfers or property refinancing.	RWQCB4	Worked with AB 885 Committee.		Continue with ongoing activities.
Coordinate 159	Develop a uniform standard of practice for the inspection of OSDS and pumping of tanks if necessary during real estate transfers or property refinancing.	RWQCB7	RWQCB7 did participate in stakeholders meetings which were utilized during the development of standards.		
Coordinate 160	Develop a uniform standard of practice for the inspection of OSDS and pumping of tanks if necessary during real estate transfers or property refinancing.	RWQCB9	Not done.	Limited staff and funding.	None.
Coordinate 98	Develop MOA between agencies that operate OSDS facilities, the SWRCB/RWQCBs, and local health departments.	SWRCB	The SWRCB OWTS regulations now contain minimum requirements for MOU' s between local agencies and Regional Boards for the implementation of the regulations.		
Coordinate 154	Develop a uniform standard of practice for the inspection of OSDS and pumping of tanks if necessary during real estate transfers or property refinancing.	SWRCB	The State has made no progress on this task.	Funding for this project was cut in 2002, and limitations to staffing and other resources have impeded progress.	Continue ongoing activities.
Track and Monitor 170	Evaluate the adequacy of local OSDS oversight programs which have been under waiver resolutions with the RWQCB.	RWQCB2	Three counties and one special district have updated their regulations, with Regional Board review and comment. Comprehensive evaluations of local programs deferred pending promulgation of statewide regulations.	Limiting funding and staff time available for comprehensive evaluations.	After statewide regulations adopted, RWQCB 2 will evaluate all local agency programs and update waivers to address new regulations as necessary.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 3.5 Transportation Development

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 126	Conduct more intensive site-specific evaluations of impacts of the California Department of Transportation (Cal/Trans) and local public road maintenance practices.	RWQCB6	Staff reviewed stormwater management and monitoring plans for potential impacts from de-icers, abrasives and snow removal practices. Staff also coordinated meetings of the Tahoe Interagency Road Runoff Subcommittee.		Continue ongoing activities.

Management Measure 3.5A Transportation Development - Planning, Siting, and Developing Roads and Highways

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 1374	Provide stencil to units to label where drain outfalls terminate.	DPR	Deliver stencils to all districts.		Continue ongoing activities.

Management Measure 3.5F Transportation Development - Road, Highway, and Bridge Runoff System

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 409	Cal/Trans Hydro Seeding Demonstration Project: Cal/Trans staff is currently seeking funding for a demonstration project utilizing hydroseeding equipment with a compost slurry.	CIWMB	CIWMB was unable to develop a project with Cal/Trans.	Lack of funding.	Caltrans will continue to support the use of urban-derived compost and mulch in various projects throughout the state. Contact Gregory Balzer of Cal/Trans for more information (916 653-4337).
Implement 410	Cal/Trans Erosion Control Project: Utilize mulch, compost, and co-compost (biosolids composted with yard trimmings) as erosion control materials for revegetation of roadsides.	CIWMB	Caltrans researched the impacts of using urban-derived compost and mulch for erosion control. Cal/Trans has utilized large amounts of urban-derived compost and mulch in various projects throughout the state.	Quality and cost of compost and mulch must be considered in every project.	Continue to look for projects where urban-derived compost and mulch can be feasibly used. CIWMB will support Caltrans in these efforts. Contact Gregory Balzer of Cal/Trans for more information (916 653-4337).

Management Measure 3.6 Education/Outreach

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 20	Provide technical support to cities in development of Urban Runoff Plans using the Model Urban Runoff Program (MURP).	RWQCB7	Mostly accomplished.		

Coordinate 200	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	RWQCB7	There is ongoing financial support of the development, distribution, and implementation of K-12 watershed education curriculum.		Continue funding.

Management Measure 3.6A Education/Outreach - Pollution Prevention/Education: General Sources

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Coordinate 189	Provide watershed information at coastal access points—such as State Parks, piers, and beach locations.	CCC	The Boating Clean and Green Campaign has provided watershed and polluted runoff information in marinas. Signage at other coastal access points—such as State Parks, piers, and beach locations, would more typically be provided by the State Coastal Conservancy, State Parks and local agencies.	This type of information is not typically part of the work of the Coastal Commission staff.	Continue to encourage other agencies to provide information to the public on watersheds and polluted runoff at coastal access points.
Coordinate 22	Provide technical support to cities in development of Urban Runoff Plans using the Model Urban Runoff Program (MURP).	CCC	Develop and revise the MURP How-to Guide. Make the Guide available to municipalities via the Internet. Hold workshops. The Guide was first completed in July 1998 and then revised in February 2002. It is currently residing on SWRCB Stormwater website. A resource list has also been developed and made available to the public. Several workshops have been held to introduce municipalities to the document. The most recent ones were held in Vallejo and Eureka.	When the CCC staff attempted to revise the document in 2001 and 2002, they encountered difficulties in obtaining the original manual in its appropriate electronic format, resulting in delays. In addition, the original MURP guidance was largely based on Central California coastal issues. Additional staff time was required to modify the MURP guidance for applications on the North Coast. Offers to provide workshops in Southern California were declined, in part because the small municipalities were already implementing MURP-like programs.	Continue to hold BMP-oriented workshops. Survey communities already implementing MURP to explore improvement opportunities and future directions. Make MURP fully accessible via the Internet.

Coordinate 188	Integrate watershed and polluted runoff information into CCC' s General Education Program.	CCC	The WQ Unit staff has participated in outreach opportunities to educate kids about biological diversity, water quality, and NPS pollution. When appropriate, the watershed perspective has been emphasized.	Funding and staff resources. In addition, there has not been a systematic approach to the WQ Unit' s educational and outreach efforts.	Continue to participate in public education and outreach efforts where appropriate. As resources allow, partner with the CCC' s PE Unit to develop a comprehensive program where the issue of water quality is explored with a watershed approach.
Coordinate 191	Coordinate annual Household Hazardous Waste or Used Oil Recycling conference for local managers.	CIWMB	Provide annual training on HHW regulated practices information exchange, etc.		Continue ongoing annual conference.
Coordinate 30	Conduct BMP workshops for local developers.	RWQCB2	Eight to ten erosion control workshops per year were held for developers and municipalities.		Ongoing erosion control workshops planned for 03-08.
Coordinate 187	Participate on technical advisory committees to address urban runoff issues.	RWQCB2	Staff have participated on statewide and regional advisory committees.		Role on advisory committees will continue.
Coordinate 195	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	RWQCB2	This has been done through various grants supporting educational activities.		Ongoing financial support through grants, supplemental environmental projects from fine monies, etc.
Coordinate 18	Provide technical support to cities in development of Urban Runoff Plans using the Model Urban Runoff Program (MURP).	RWQCB2	Accomplished through erosion control workshops and outreach materials.		Ongoing technical assistance will be provided.
Coordinate 23	Support the Urban Pesticide Committee (UPC) in its role in coordinating activities of the SF Bay Area and Central Valley agencies and other entities interested in OP pesticides in urban creeks.	RWQCB2	Host UPC meetings, prepare agendas, minutes, meeting management. Six meetings per year; coordinate regulations; education outreach implementation; technical issues. Serves as TMDL stakeholder group.		Continue meeting.
Coordinate 197	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	RWQCB4	Efforts supported through grants and enviroscape presentations at local elementary schools.	Limited resources.	Continue activities as resources allow.

Coordinate 199	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	RWQCB6	Support provided through grant-funded project elements and staff presentations at local schools.		Continue activities.
Coordinate 31	Conduct BMP workshops for local developers.	RWQCB6	Staff conducted, or assisted with, contractor workshops in Tahoe, Truckee, Mammoth-Owens watersheds. Staff also conducted a turf management workshop.		Continue activities.
Coordinate 21	Provide technical support to cities in development of Urban Runoff Plans using the Model Urban Runoff Program (MURP).	RWQCB9	Municipal storm water NPDES permits for two of the three counties in SD region require development of both jurisdictional and watershed urban runoff management plans; SDRWQCB works with permitees in development and review of plans.	Limited staff and funding.	Continue and extend to third county.
Coordinate 202	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	RWQCB9	Not done.	Limited staff and funding.	None.
Coordinate 16	Provide technical support to cities in development of Urban Runoff Plans using the Model Urban Runoff Program (MURP).	SWRCB	The SWRCB' s contract with the CCC included the expansion (CCC didn' t develop it) of the MURP to other cities, and SWRCB staff have participated in MURP workshops throughout the State. Additionally, updates to the MURP are placed on the SWRCB Stormwater web page so that public can have greater access to it.		Continue with Support of MURP.
Coordinate 193	Support financially the development, distribution, and implementation of K-12 watershed education curriculum.	SWRCB	Funds were provided to Adopt-A-Watershed education. In addition SWRCB staff (via the Clean Water Team) provided teacher training through Project WET. The SWRCB NPS web page has been updated to include educational resources for teachers.	Due to downsizing of the Clean Water Team, continued expansion of K-12 watershed education has been limited. However, SWRCB in collaborating with agencies in Cal/EPA and Resources Agency to maximize their education outreach.	Continue support of education programs that focus on TMDL implmentation on a project basis. Continue Coordination with other agencies on environmental education programs.
Plan 180	Establish criteria and award categories for Handling of Hazardous Waste awards program.	CIWMB	5 to 6 awards given each year to local governments.		Continue awards program annually.

Plan 183	Disseminate information on utilizing resource-efficient landscaping practices at landscape industry trade shows and conferences. Provide local jurisdictions with educational materials for distribution at community events.	CIWMB	Educated hundreds of homeowners and landscapers on resource-efficient landscaping practices	Lack of funding to attend events.	
Plan 181	Plan and organize annual conference and training for local Household Hazardous Waste; Conditionally Exempt Small Quantity Generator program managers.	CIWMB	Annual Handling of Hazardous Waste Conference, originally co-coordinated with the DTSC.		Continue annual conference.
Plan 182	Develop educational materials to promote the use of low input landscape maintenance practices to conserve water, reduce waste generation, promote the use of urban derived compost and mulch product, and to reduce the use of chemical fertilizers, and herbicides.	CIWMB	Developed CIWMB fact sheets on resource efficient landscaping, turf management, and reducing green waste. Distributed fact sheets to professional landscapers at trade shows, conferences, landscape workshops.	Lack of funding to attend events.	Develop more educational materials geared towards homeowners.
Plan 179	Develop sustainable Environmental Design Education Program that promotes sustainable environmental design principles for use in university building and landscape architecture degree programs, and in landscape architecture industry associations' continuing education programs.	CIWMB	Contractor surveyed colleges regarding existing landscaping curriculum. Over 20 colleges responded to survey. Proposal of development of curriculum based on survey results available. Survey targeted sustainable landscaping courses, and derived appropriate changes to course curricula to promote design principles that foster sustainable environmentally sound landscaping.	Contract funding is inadequate to impact curriculums in California.	Develop general sustainable landscaping curriculum and promote to colleges in state.
Plan 175	Develop urban pesticide control education program.	RWQCB2	A variety of educational materials and programs have been developed through municipal stormwater programs, etc., including IPM programs.		Continuing support of pesticide education and outreach as part of TMDL implementation; management of two Prop. 13 grants on pesticide education for distributors and pest control operators.

Plan 177	Public education—Plan and participate in activities such as Air Faire, Truckee River Days, Earth Day, National Wetlands Month; place educational exhibits and make presentations at public places including public schools.	RWQCB6	Staff participated in several public education events.		Continue activities.
Implement 220	Implement education component of MURP—a joint project by the City of Watsonville, MBNMS, and CCC.	CCC	Develop and revise the MURP How-to Guide. Make the Guide available to municipalities via the Internet. Hold workshops. The Guide was first completed in July 1998 and then revised in February 2002. Staff at the City of Watsonville converted portions of the document into a website. The MURP guidance document is currently residing on CCC' s website. A resource list has also been developed and made available to the public. Several workshops have been held to introduce municipalities to the document. The most recent ones were held in Vallejo and Eureka.	An interactive website on MURP was developed by students in the City of Watsonville, but it was never fully completed.	Make MURP fully accessible via the Internet.
Implement 213	Implement Grasscycling Outreach Campaigns in selected geographic areas to promote grasscycling to residents. Developed grasscycling video, PSA' s, brochures, and fact sheets in 1999 to distribute during Grasscycling Outreach Campaigns.	CIWMB	Grasscycling campaigns implemented in Sacramento, SF Bay Area, Los Angeles, and River/SanBernardino Counties in 1999, 2000, 2001. PSA' s and educational materials developed. Several jurisdictions implemented mower trade-in events to reduce green waste and air emissions. Over 5,000 gas-powered mowers were exchanged for electric mulching mowers.	No funding for future grasscycling campaigns.	
Implement 211	Continue statewide agricultural, racetrack, farm worker, driver education, boater, off-highway, vehicle education and outreach projects.	CIWMB	Grantees and Board combine to staff outreach programs to minimized pollution reach millions annually. Local Agricultural Commissioner acts as advisors to assist counties in agricultural used oil collection programs. Activities with Parks and Recreation through brochures, premiers, and articles with newsletter. DMV registration materials ads; California Coastal Core Schools and rural outreach for recycling of used oil and Handling of Hazardous waste.		Continue education efforts.

Implement 212	Implement Landscape Management Outreach Programs in selected geographic areas to promote resource-efficient landscaping practices to landscape maintenance contractors, professional gardeners, and landscape site managers.	CIWMB	Sponsored landscape outreach programs in Sacramento, SF Bay Area, San Joaquin County, Riverside/San Bernardino Counties, and Orange County. Educational materials distributed to professional landscapers at local events. On-site audits, workshops, and outreach activities implemented.	Lack of funding to continue most programs.	Continue implementing the North Natomas Landscape Outreach Program in Sacramento by educating residents on how to manage landscapes to reduce green waste, conserve water, and minimize nonpoint source pollution.
Implement 74	Work with cities and counties to implement MURP.	RWQCB2	Stormwater staff work with other agencies on outreach and coordination.		Ongoing work with other agencies to implement urban runoff model programs.
Implement 221	Implement education component of MURP—a joint project by the City of Watsonville, MBNMS, and CCC.	RWQCB3	Proposition 13 grant awarded to Santa Cruz County for MURP.		Develop grant.
Implement 203	Facilitate the Sacramento River Watershed Program Public Outreach and Education (POES) Subcommittee.	RWQCB5	Education activities such as public service announcements, presentations and booths.		
Implement 204	Conduct Placer Country Resource Conservation District (RCD) bioassessment and training seminars and related activities.	RWQCB5	Nine trainings were completed between 1998-2003.		
Implement 205	Make presentations to target corporation pesticide control operators (PCOs) on water quality and pesticide toxicity.	RWQCB5	Staff continues to make presentations and provide outreach functions.		Continue ongoing activities.
Implement 208	Prepare newspaper articles and press releases to increase public awareness of watershed issues.	RWQCB6	Staff invited reporters and/or prepared articles on watershed issues.		Continue activities.
Implement 207	In public schools, participate in AAW and other watershed-awareness activities.	RWQCB6	Staff participated in several watershed awareness events at local public schools.		Continue activities.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Implement 210	Implement extensive outreach effort to inform public awareness of environmental threat of the invasive green algae, Caulerpa taxifolia.	RWQCB9	Prepared and distributed outreach materials; displayed and distributed materials and made presentations at conferences and meetings; prepared and sent letters to key audiences; conducted and participated in workshps; met with lagoon users.	Limited staff and funding.	Develop scope of work and budget for use of grant funds earmarked for outreach.
Implement 78	Implement extensive outreach effort to prevent storm drain discharges of the invasive green alga, Caulerpa taxifolia.	RWQCB9	Prepared and distributed outreach materials; displayed and distributed materials and made presentations at conferences and meetings; prepared and sent letters to key audiences; conducted and participated in workshops; met with lagoon users.	Limited staff and funding.	Develop scope of work and budget for use of grant funds earmarked for outreach.
Implement 222	Distribute a Polluted Runoff Edition of the SCC' s magazine "Coast and Ocean."	SCC	Prepared two major, and several related, features on coastal water quality in California Coast & Ocean (2001-2003).	Project staffing.	
Track and Monitor 223	Assess watershed and polluted runoff educational programs in California and evaluate their effectiveness.	CCC	Assess watershed and polluted runoff educational programs in California, including public awareness baseline and follow-up surveys and evaluate their effectiveness. The CCC water quality staff worked with an IACC subcommittee to evaluate the status of nonpoint source pollution education by state agencies and has identified a preliminary list of objectives for state agencies.	Lack of funding and staff resources for a comprehensive statewide survey of watershed and polluted runoff education.	Will consider revisiting this issue after completion of the Second Five-Year Workplans in late 2003.
Track and Monitor 226	Citizen' s Monitoring Program. Monitoring program for Water Events demonstrating watershed models.	SWRCB	Managed contract for statewide coastal snapshot event for May 17, 2003. Truckee Tahoe Support event in years 1, 2 , and 3. National Water Monitoring Day: October 18, 02. National Secchi Dip-In Day (July 01, 02). Provided trainers for workshops. Provided Multiple Data Management Workshops.	Not enough staff for full activity implementation.	

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure All-U All Urban Measures

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Pre-Implement 1327	Functional Assessment Criteria Test (FACT) contract with the UC Davis Information Center on the Environment (ICE) was originally intended to identify and characterize methods of evaluating MP' s. Some focus later developed within the broader scope of performing MM effectiveness monitoring and assessing the potential role of citizen monitoring for MP effectiveness evaluations.	SWRCB	Collection, analysis and follow-up with interviews of the restoration and other watershed project contact people and associated knowledgeable individuals.	Lack of staff and funding slowed progress. Also, one of the difficulties citizen monitors encountered was the lack of established MPs onsite in order to monitor their effectiveness.	Continue ongoing activities.
Assess 1312	Assess additional local programs, foster relationships with local governments and determine types of guidance and information on polluted runoff that would help further both programs' pollution prevention efforts.	BCDC	Roadblocks prevented activity accomplishment.	During the public hearings and workshops for the proposed water quality Bay Plan Amendment, staff received comments that working with or educating local governments is not an appropriate role.	This activity is listed for 03-04 but will not be included in the next five-year plan.
Assess 125	Develop regional monitoring strategy; coordinate monitoring with local partners to monitor and assess watersheds in urban areas for CWA §305(b)/§303(d) listings.	RWQCB2	Strategy developed; §303(d) listings updated.		Ongoing process of regional monitoring and impaired waterbody listings.
Assess 1328	Toxicity tests performed on Chollas Creek to assess how tactable water quality is.	SWRCB	The Chollas Creek project did successfully demonstrate that volunteer water quality monitors CAN, with appropriate training and equipment provision, conduct relatively involved toxicity tests yielding reasonable and believable results for the local watershed.	Lack of staff and funding prevents continued research.	Continue monitoring methods.
Plan 4	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB1	None to date. This will occur when we develop TMDLs for watersheds with urban areas.	None.	Requires initial development of a TMDL for watersheds with Urban Areas.

Section IV
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 5	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB2	Incorporation of MMs is being done through stormwater permits and TMDL implementation plans.		Ongoing activities through TMDL development and implementation.
Plan 6	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB3	TMDLs and implementation plans developed for San Lorenzo River, Morro Bay and other water bodies as described in TMDL Project Tracking Tool.		Continue as described in TMDL Project Tracking Tool.
Plan 7	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB4	TMDL implementation plans and stormwater permits.	Difficulty in coordination between TMDL staff and municipalities.	
Plan 13	Develop Trash TMDLs.	RWQCB4	Trash TMDL completed for LA River.		Implement MM to meet TMDL requirements.
Plan 9	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB6	MMs were incorporated where applicable in TMDL implementation plans and stormwater permits.		continue ongoing activities.
Plan 14	TMDL development for Diazinon.	RWQCB9	OAL approval of this TMDL is pending.	Development of TMDLs is a time consuming, resource intensive bureaucratic process. There are also stakeholder issues.	Implement TMDL upon approval.
Plan 12	Incorporate applicable MMs into Urban TMDL development strategies and implementation plans.	RWQCB9	Several TMDLs that involve urban areas in the San Diego region are under development. They will include appropriate implementation Measures.	Development of TMDLs is a time consuming, resource Intensive, bureaucratic process. There are also stakeholder issues.	Continue development of TMDLs.
Plan 2	Promote watershed planning and the development of regional watershed management plans that include MMs and foster implementation of these plans.	SWRCB	The SWRCB has developed language for grant RFPs that prioritizes funding of projects having watershed-based plans. SWRCB is also a co-facilitator of the Statewide Watershed Management Strategic Planning.		Continue with ongoing activities.

Target 133	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB2	WMI chapters updated and developed and inspections conducted.		Continue Ongoing Activities.
Target 134	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB3	WMI Chapters and Updates were developed.		Annual WMI updates.
Target 135	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB4	Advise Other Regional Board programs (I.e. NPDES, Stormwater, etc.) to inform them of NPDES or SW Permits. Quarterly meetings through interagency meetings.	Follow through with coordination.	Clarify at quarterly coordination meeting.
Target 137	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB6	WMI Chapter and updates were completed.		Continue activities.
Target 138	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB7	WMI chapter and updates developed.		Development of WMI Chapters.
Target 140	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	RWQCB9	Municipal storm water NPDES permits for two of the three counties in the SD Region require implementation of appropriate measures to deal with runoff from developing urban areas.	Permitee and developer resistance; limited staff and funding.	Continue and extend to third county.
Target 131	Target applicable MMs through the Watershed Management Initiative (WMI) implementation plans.	SWRCB	The SWRCB and Regional Boards prepare WMI Chapters periodically which address NPS pollution as well as other pollution sources.	Time and funding.	Continue Ongoing Activities.

Implement 79	Review new Local Coastal Programs (LCPs), Local Coastal Program Amendments (LCPAs), and Coastal Development (CDP) applications.	CCC	The WQ Unit has provided assistance on numerous CDPs and several LCPs. Some of the notable CDPs include Crystal Cove, Pt. Reyes Affordable Housing, and Seadrift Lagoon PVC Bulkhead. LCPs on which staff invested a lot of effort include Malibu, San Diego, Monterey, Carmel and San Luis Obispo.	With California' s budget deficit and a hiring freeze, the California Coastal Commission is losing staff without the ability to replace them. This may reduce the staff resources available for review of coastal land use decisions.	The WQ Unit will continue to educate staff planners on all the different WQ and NPS issues. This will hopefully allow the WQ Unit staff to focus more on the implementation of the State' s NPS Program. Continue developing the LCP Development Guidance and monthly NPS fact sheets, and revising the Commission' s PGM for Nonpoint Source Pollution.
Implement 1380	Litter Glitter Education Program utilized at park units to educate about effects of litter on environment.	DPR	1,786 campfire programs; 108,345 hikes, tours, talks demos, and A-V; 136,885 presentations total.		Continue ongoing activities.
Implement 1372	BCP for wash racks.	DPR	No Progress.	Rejected by finance. No resource to construct these facilities.	Continue ongoing activities.
Implement 73	Review of Marin County Action Plan 2005.	RWQCB2	Action Plan was reviewed and approved.		
Implement 87	SCC will be administering grant agreements with project sponsors as projects are nominated by the SMBWC.	SCC	Program Proposition 12 grants; Work with SMBRC and grantees to encumber funds.	Project staffing.	Continue to program Proposition 12 grants (2003-2006).

SECTION V
PROGRESS DISCUSSION
MARINAS CATEGORY
July 2001 – June 2003

A. INTRODUCTION

The USEPA (1993) identifies several sources of pollution associated with marinas and boating activities. These sources include poorly flushed waterways, pollutants discharged from boats (recreational boats, commercial boats, and "live-aboards"), pollutants carried in stormwater runoff, physical alteration of wetlands and of shellfish/ other benthic communities during construction of marinas, ramps, and related facilities, and pollutants generated from boat maintenance activities on land and in the water. Pollutants from marina facilities and recreational boats are less likely to be buffered or filtered by natural processes. When boating and related activities are poorly planned or managed, they may threaten the health of aquatic systems and pose other environmental hazards

The Marinas and Recreational Boating Land Use Category, and the 16 MMs were developed to address marina and recreational boating sources of nonpoint pollution. The MMs are listed in Table VIA, and pertain to the following facilities:

- Any facility that contains ten or more slips, piers where ten or more boats may tie up, or any facility where a boater for hire is docked;
- Any residential or planned community marina with ten or more slips;
- Any mooring field where ten or more boats are moored;
- Public or commercial boat ramps;
- Boat maintenance or repair yards that are adjacent to the water and any federal, State, or local facility that involves recreational boat maintenance or repair on or adjacent to the water.

The activities that the IACC developed since 1998 with respect to the Marinas Category are tabulated in the Activity Summary Table of this Section. These activities, as they relate to the Marinas MMs have been scored, in an effort to describe the level of completeness with which each MM was addressed. The scoring included an identification of each activity as being 'Complete', 'Partially Complete', or 'Not Performed'. A summation of these activity scores is provided in Table VIA, below.

In general, it can be said that 98, out of 211 (or approximately 46%) of the listed activities were completed for the NPS Program. Furthermore, about 83% of the listed activities were either partially or completely accomplished. What these statistics tells us with respect to the completeness of MM implementation, and its affect on beneficial uses and water quality remains undefined. This inability to effectively determine the level of completeness of MM implementation is something that is being addressed through the MM Tracking Project, which is currently taking place in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

TABLE VA
TALLY OF ACTIVITIES ADDRESSING
MARINAS AND RECREATIONAL BOATING MMs

	Completion Status			Total
MANAGEMENT MEASURES	**Complete**	**Partial**	**Not Performed**	
4. Marinas and Recreational Boating				
Activities addressing all Categories	56	40	20	**116**
Activities addressing all Marinas MMs	4	9	3	**16**
4.1 Assessment, Siting and Design				
A. Marina Flushing			2	**2**
B. Habitat Assessment				**0**
C. Water Quality Assessment		7	1	**8**
D. Shoreline Stabilization				**0**
E. Storm Water Runoff				**0**
F. Fueling Station Design				**0**
G. Sewage Facilities	5	11	6	**22**
H. Waste Management Facilities	6			**6**
4.2 Operation and Maintenance				**0**
A. Solid Waste Control				**0**
B. Fish Waste Control	1			**1**
C. Liquid Material Control				**0**
D. Petroleum Control	2			**2**
E. Boat Cleaning and Maintenance	5	7	2	**14**
F. Maintenance of Sewage Facilities				**0**
G. Boat Operation				**0**
4.3 Education/Outreach	19	3	2	24
A. Public Education				**0**
Marinas Totals:	**98**	**77**	**36**	**211**

B. MARINA CATEGORY OBJECTIVES

In June of 2002, the SWRCB, CCC and other IACC agencies began the process of establishing the overall program objectives as well as individual MM category objectives for the 2003-2008 NPS Implementation Plan. These objectives were intended to drive the development of activities that would help to achieve the overall goals of the program for each land use category and to encompass activities that agencies have been conducting since 1998. Much thought and consideration was given to ensure that the objectives were realistic and that they reflect current resource constraints. The Marinas and Recreational Boating Category Objectives are as follows:

a. Assess implementation and effectiveness of existing standards and develop and enforce standards that will decrease marina and recreational boating's contribution to nonpoint source pollution.
b. Develop educational programs, training workshops and other outreach services to increase marinas and recreational boater's pollution prevention efforts.
c. Develop systems to reward marinas for pro-active environmental-friendly activities.
d. Assess existing environmental services and expand environmental services at marinas that are supportive of clean boating practices.
e. Develop information on the overall effectiveness of MP implementation on improving water quality.

f. Continue to improve upon and expand existing interagency coordination to more effectively manage pollution from recreational boaters and marinas.
g. Continue to assess waterbodies, identify sources of NPS impacts from recreational boaters and marinas and increase inspections.
h. Develop and implement watershed-based plans, including TMDLs in order to identify and address impacts from recreational boaters and marinas.
i. Continue educating marina owners and operators about the programs and funds that are available to help them comply with local, state, and federal regulations.

TABLE VB
TALLY OF ACTIVITIES
ADDRESSING FUTURE MARINAS
AND RECREATIONAL BOATING CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
Marinas and Recreational Boating Management Measures	**Marinas Activity Tallies**		
a) Assess implementation and effectiveness of existing standards and develop and enforce standards that will decrease marina and recreational boating' s contribution t nonpoint source pollution.	11	13	11
b) Develop educational programs, training workshops and other outreach services to increase marinas and recreational boater' s pollution prevention efforts.	22	9	3
c) Develop systems to reward marinas for pro-active environmental-friendly activities.	0	1	0
d) Assess existing environmental services and expand environmental services at marinas that are supportive of clean boating practices.	10	4	1
e) Develop information on the overall effectiveness of MP implementation on improving water quality.	1	4	0
f) Continue to improve upon and expand existing interagency coordination to more effectively manage pollution from recreational boaters and marinas.	5	3	1
g) Continue to assess waterbodies, identify sources of NPS impacts from recreational boaters and marinas and increase inspections.	4	11	3
h) Develop and implement watershed-based plans, including TMDLs in order to identify and address impacts from recreational boaters and marinas.	0	3	0
I) Continue educating marina owners and operators about the programs and funds that are available to help them comply with local, state, and federal regulations.	13	3	2
Total Marinas:	**66**	**51**	**21**

C. ISSUES AND CHALLENGES

The primary issues associated with Marinas are related to the insufficiency of the number of regulatory or inspection authorities relative to the number of registered boats and marinas, and other budgetary constraints that affect Marinas programs and activities. There are nearly one million registered boats and approximately 650 marinas in California. Marinas and boaters fall under the jurisdiction of multiple State and local agencies. In many cases, marina facilities are not being regulated and are rarely inspected. These causes of NPS pollution in Marinas are often seen as a low priority for many regulatory agencies, and boating enforcement actions have primarily been in the area of boater safety.

D. MARINAS TOPICS FOR DISCUSSION

1. Marinas and Recreational Boating Workgroup

To assist in implementation of the MMs and coordination of efforts among State agencies, the Marinas and Recreational Boating Workgroup (Marinas Workgroup) was established through the IACC in February 2002. Fifteen State agencies are represented in the Workgroup, which continues to meet every other month.

The primary goals of the Marinas Workgroup are to: (1) develop partnerships and coordinate activities with those state agencies responsible for implementing management measures for this NPS category, and (2) work cooperatively together to avoid duplication of effort, maximize cost efficiency, and complete task specified in each agency's Five-Year Implementation Plan. Issues that the workgroup has focused on include:

1. Establishing regional standards for sewage disposal facilities
2. Fueling station design and petroleum control
3. Boat hull cleaning
4. Hazardous waste and used oil recycling services
5. Bilge pumpouts and bilge pad exchange/disposal
6. Mapping of marinas sites to identify existing services and where additional services are needed.

2. Marina Fueling Facility (MFF) Project

The purpose of the Marina Fueling Facility (MFF) Project has been to: (1) evaluate existing design, construction and operation of underground storage tank (UST) and above ground storage tank (AST) marina fueling systems statewide; (2) effectively follow-up and implement recommendations published in the *Report Of The SWRCB's Advisory Panel on Fueling and Refueling Practices at California Marinas*; and (3) increase regulatory compliance with state and federal UST/AST laws. Accomplishments over the past two years include:

1. SWRCB contracted to develop and publish standards for marina fueling systems, including both UST and AST systems.
2. SWRCB sent letters to all known MFFs to update owners/operators on our MFF Project activities.
2. A technical symposium was held on June 26, 2002 to provide a forum for exchange of technical information on marina fueling system concepts related to leak prevention and spill containment.
3. Inspected marina fueling systems statewide to determine how marina fueling systems are designed and operated. A variety of system construction and leak detection methods were identified.
4. Gathered data on fuel releases reported at marinas with fueling systems to evaluate their effectiveness at preventing releases to surface water.
5. Conducted a nationwide survey of state agencies regulating fueling systems located at marinas including State-specific information on rules for construction and operation of fueling systems and special guidelines. The focus of the survey was to identify states that had developed specific UST and/or AST program elements for fueling systems located at marinas.

3. Pilot San Francisco (SF) Bay Marina Water Quality Study

The objective of the *SF Bay Marina Water Quality Study* is to establish baseline information on the condition of selected marinas in San Francisco Bay regarding selected pollutants, to provide a better understanding of existing water and sediment quality conditions at marinas in SF Bay; and to provide regulatory guidance to BCDC and other agencies.

Accomplishments to date include:

- Received funding from NOAA for a NPS work program, with allocations and a pilot marina water quality study.
- Awarded a NOAA Coastal Management Fellow to conduct all aspects of the pilot SF Bay Marina water quality study.
- Developed a SF Bay Marinas and Recreational Boating Nonpoint Source Task Force and a separate Technical Advisory Committee, each comprised of marina and boating organizations, federal, State, and local agencies, and environmental organizations to guide the study.
- Completed literature review on existing marina water quality data, related studies around the world, and general water quality monitoring programs.
- Formed Interagency-Agreement with Moss Landing Marine Labs to assist with the pilot marina water quality study.
- Developed criteria for selecting four SF Bay marinas for the study.
- Developed draft conceptual study design. All drafts were reviewed by the TAC.

4. Public Outreach and Education Efforts

Multiple education and Outreach efforts have been coordinated by the CCC, as described below:

a. Assessment of existing environmental services.

The purpose of this activity has been to identify gaps in environmental services provided for boaters in order to target funds to areas of greatest need. Most of the funding for this activity has been provided by the CIWMB. Additional funding sources include the CCC, the USEPA, and NOAA. Since 1999, the Boating Clean and Green Campaign identified used oil recycling, hazardous waste collection, sewage pump-out, bilge pump-out, absorbent pad distribution, and oil change services provided by California marinas. The Campaign continues to update this list of services. In addition, in 2003, the Campaign began a project to develop a GIS-based map of all marinas in the state and the environmental services that they provide for their customers.

b. Implementation of education and outreach programs

The purpose of the CCC's Boating Clean and Green Campaign is to educate boaters and marinas throughout the state about clean boating practices and to motivate changes in behavior that will result in cleaner water. Over the past two years, the Campaign has achieved significant accomplishments in areas of research, educational programs at boat shows, marina supply shops, boat launch ramps, fuel docks, and in continuing the California Clean Boating Network (CCBN).

The CCBN has grown to a three-chapter organization (Northern, Central Coast and Southern California), each of which meets quarterly throughout the state. Quarterly meetings include speakers on clean boating education and new technologies, networking opportunities, field trips to see new clean boating services, and support for the development of new clean boating education programs.

5. California Clean Marina Guidebook.

The purpose of the California Clean Marina Guidebook is to provide marina operators with a "how to" manual for implementing clean marina practices at their facilities. The Guidebook is intended to provide a list of voluntary measures that a marina can choose to implement. Accomplishments over the past two years include the following:

A first draft of the Guidebook was circulated for public comment and two public comment workshops were held between September and December 2002. After complete review and input from the Advisory Committee, the Commission issued a second draft in June 2003 with a three-month comment period to be completed in September 2003.

E. NEXT STEPS

The Five-Year Plan for Marinas and Recreational Boating provides structure which can be used to address NPS pollution in these areas. It is anticipated that efforts which utilize collaboration, such as the of the IACC will improve the chances for better coordination and greater water quality protection. Other activities may include the following:

1. Promotion of recommendations by members of statewide marina associations to non-association marinas.
2. Consideration of a statewide clean marinas recognition program, using the Guidebook as the basic criteria for clean marinas.
3. Publication of material and design standards, a report on findings of the statewide marina fueling facility inspections, and recommendations to the UST and AST programs to prevent fuel releases to surface water.
4. The SWRCB and RWQCBs will consider the adoption of regulations for design, construction, and operation of marina fueling systems.
5. Sediment sampling will be conducted at SF Bay marinas selected to participate in a pilot study.
6. BCDC staff will collaborate with SF Bay Keeper and other organizations to conduct water sampling for pathogens, nutrients, and physical water quality parameters.
7. The development and distribution of regional boating maps for distribution that include clean boating information.
8. Require the installation of additional sewage disposal facilities and repair and maintenance of existing disposal facilities in selected regions.

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Marinas

Management Measure 4.1A Assessment, Siting, and Design - Marina Flushing

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 447	Establish baseline water quality data at marinas.	RWQCB9	CWC section 13225, letters requesting submittal of proposed harbor monitoring programs were sent to port/harbor authorities (letters dated 7/24/03).	Limited staff and funding; reluctance of port/harbor authorities.	Review submittals; direct initiation of harbor monitoring.
Implement 448	Establish baseline water quality data at marinas.	SWRCB	No action taken due to lack of resources.	Lack of Resources	

Management Measure 4.1C Assessment, Siting, and Design - Water Quality Assessment

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 420	Inventory existing data on water quality conditions at marinas to identify levels and potential sources of priority pollutants and stressors such as metals (e.g., copper, lead, tributyltin[TBT]), pathogens or high coliform counts, and other associated pollutants.	RWQCB2	RWQCB 2 staff working with BCDC to develop marina monitoring program.	Lack of funding for RWQCB 2 to complete this task.	RWQCB 2 will be cooperating with BCDC on marina assessment. RWQCB 2 also managing contract on "Green Marinas" to assess marinas and encourage BMPs.
Assess 421	Inventory existing data on water quality conditions at marinas to identify levels and potential sources of priority pollutants or stressors such as metals (e.g., copper, lead, tributyltin[TBT]), pathogens or high coliform counts, and other associated pollutants.	RWQCB3	Morro Bay CCMP, others to be developed in accordance with CCA Strategy.		
Coordinate 431	Provide water quality data to marinas (port captains, harbor masters, lessors, marina owners, etc.) and the public to help identify baseline conditions.	RWQCB2	Worked with BCDC and through other grants in an attempt to establish baseline values.	Lack of Funding and Staff.	

Coordinate 432	Provide water quality data to marinas (port captains, harbor masters, lessors, marina owners, etc.) and the public to help identify baseline conditions.	RWQCB3	Attended sampling trips that monitor ocean water quality.		Activity was completed.
Plan 1292	Undertake a marina design study and develop guidelines for new and expanding marinas to minimize polluted runoff impacts.	BCDC	Any guidelines that are developed should be Statewide, and BCDC may not be the best agency to undertake the study.	Any guidelines that are developed should be Statewide, and BCDC may not be the best agency to undertake the study.	This activity is listed for 04-05 but will likely not be included in the next five-year plan.
Implement 441	Establish baseline water quality data at marinas.	RWQCB2	Worked with BCDC and through other grants in an attempt to establish baseline values.	Funding and staff.	
Implement 442	Establish baseline water quality data at marinas.	RWQCB3	Data is being collected in conjunction with Central Coast Ambient Monitoring Program.	Limitations of resources for monitoring and assessment.	Monitoring to continue on 5-yr rotational basis.
Implement 443	Establish baseline water quality data at marinas.	RWQCB4	Completed for certain Marinas in TMDLs.	Limited resources, reduction of funding for Source Water Amendment Monitoring Program.	This may be more completely accomplished as part of the DBW contract.

Management Measure 4.1G Assessment, Siting, and Design - Sewage Facilities

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 478	Assess whether or not adequate enforcement powers exist for and are being implemented by federal, State and/or local enforcement personnel.	DBW	DBW participated in SWRCB marinas workshops. Workshops input has indicated that enforcement agencies put little effort into sewage issue enforcement.	Interest from enforcement community.	
Assess 464	Assess whether or not adequate enforcement powers exist for and are being implemented by federal, State, and/or local enforcement personnel.	RWQCB3	Coordination and strategization with agencies involved with harbor management.		Project completed.
Assess 466	Assess whether or not adequate enforcement powers exist for and are being implemented by federal, State, and/or local enforcement personnel.	RWQCB4	Through Clean Marina Work Group, concluded that enforcement powers are not being implemented.	Limited staff and resources.	Contract with Department of Boating and Waterways (DBW).

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Assess 458	Assess whether or not adequate enforcement powers exist for and are being implemented by federal, State, and/or local enforcement personnel.	SWRCB	No action taken due to lack of resources.	Lack of Resources	
Assess 456	Identify water bodies on CWA §303(d) list that are listed for bacteria (or other indicators related to vessel sewage) and that are potentially affected by discharges at marinas.	SWRCB	A marinas mapping project is currently developing GIS maps of all marinas. Once completed it will be possible to identify those marinas located in §303(d) listed waterbodies.	Lack of resources.	Continue ongoing activities.
Coordinate 546	Support development of a Statewide "Clean Marinas Program" and coordinate with other agencies to include California State Lands Commission (CSLC) leased marinas in such a Program.	CSLC	Assessment of CSLC-leased marinas as part of grant effort. Staff has participated when possible in marina-related multi-agency and multi-jurisdictional task groups including review of marina projects in Lake Tahoe, State Marina Mapping Group, IACC Marinas Subcommittee, and CCBN. In Spring 2003, a list of CSLC marinas was forwarded through the Marina mapping project workgroup to OSPR staff who are conducting site visits at state marinas in Summer 2003.	Lack of dedicated water quality staff and funding as discussed above.	Complete assessment tasks in grant.
Coordinate 540	Develop and regularly maintain a pollution information clearinghouse to include: a. BMPS; b. Guidance on federal, State and local laws and regulations; c. Examples of effective pump-out operations; d. Referrals to sources of reliable information.	DBW	Some NPS information is now available on the DBW website and brochures.	Lack of funding and staff.	
Coordinate 508	Establish agreements regarding the lead or shared responsibility for inspection of pump out facilities.	RWQCB2	Not completed	Lack of funding for RWQCB 2 to complete this task	RWQCB 2 will be pilot area for Department of Boating and Waterways project as noted; RWQCB 2 staff will be responsible for enforcement.
Coordinate 524	Establish clear lines of authority for enforcement of violations.	RWQCB2	No establishment of lines of authority for enforcing violators.	Lack of Funds and staff prevented enforcement of lines of authority.	Continue ongoing activities.

Plan 502	Establish minimum standards defining adequate number of pump-outs, dump stations, and/or restroom facilities.	DBW	DBW has entered into contract with the SWRCB to define minimum needs.	Staffing Funding	
Plan 490	Establish minimum standards defining adequate number of pump-outs, dump stations, and/or restroom facilities.	RWQCB2	SWRCB in coordination with Region 2 staff, began the process of contracting with the DBW for work in Region 2 to assess available facilities and boater demand, set regional standards, and require the installation of additional facilities.	Lack of funding for RWQCB to complete this task.	Region 2 will be pilot area for Department of Boating and Waterways project to determine pumpout needs in Tomales and San Francisco Bays.
Plan 500	Establish minimum standards defining adequate number of pump-outs, dump stations, and/or restroom facilities.	RWQCB9	Not done.	Limited staff and funding.	None.
Target 1291	Review the BCDC enforcement program's current strategies for sewage facilities and live-aboards and determine if improvements are warranted.	BCDC	There has not been progress on this task primarily because of the extended water quality Bay Plan Amendment process.	Extended water quality Bay Plan Amendment process prioritized over this task.	This activity is listed for 02-03 but will not be included in the next five-year plan; it may become part of the coordination and collaboration development process with the Regional Board's enforcement cases involving polluted runoff.
Target 484	Identify future sources of funding for pump out installations.	DBW	USFWS continues to offer grant money for the forseeable future. No additional sources are needed.	Staffing and funding limitations.	
Implement 574	Work with marina lessors, DBW and other appropriate entities to facilitate the installation of sewage pumpouts, boat-wash devices, and related NPS-control facilities at CSLC-leased marinas and/or boat launch sites.	CSLC	Continued work with willing marina operators to support efforts to install and operate vessel sewage pumpout facilities and other NPS-control facilities. In April 2001, Commission approved an application to amend a General Lease - Commercial Use to install and operate a vessel sewage pumpout station at the South Bay yacht Club, Guadalupe River. CSLC staff has also supported similar efforts in Catalina Harbor, Santa Catalina Island. In May 2001, CSLC and SWRCB staff discussed common efforts related to inspection of marina fueling stations located within CSLC jurisdiction.	Lack of dedicated water quality staff to support Land Management Division efforts.	Continue ongoing activities.

Implement 572	Meet minimum standards through financial incentives (e.g. grants to marinas; launch ramp grants to provide dump stations).	DBW	The DBW gave out grants for pumpout installations and education work.	Staff and funding limitations.	
Implement 554	Meet minimum standards through enforcement programs and effectively enforce violations.	RWQCB2	Ongoing inspections and enforcement as needed		Ongoing enforcement at marinas and boatyards as needed.
Implement 570	Meet minimum standards through recommendations or requirements as necessary that commercial entities install pump-out facilities.	RWQCB2	Not completed.	Lack of funding for RWQCB to complete this task.	RWQCB 2 will be pilot area for DBW project.
Implement 548	Include MM in WDRs for land-based facilities.	RWQCB5	No specific MMs have been developed for this purpose. Generic requirement is included in WDRs.		
Implement 564	Meet minimum standards through: Enforcement programs and effectively enforce violations.	RWQCB7	The State Board is the lead for this activity.		
Implement 1326	Establish minimum standards defining adequate number of pumpouts, dump stations, and/or restroom facilities.	SWRCB	SWRCB has provided resources to Region 8 and is in the process of contracting with the Department of Boating and Waterways for work in RWQCB 2 and 4, to assess available facilities and boater demand, set regional standards, and require the installation of additional facilities.	Activities have been delayed due to lack of Regional Board resources.	State Board will issue orders to marina owners requiring the installation of new sewage disposal facilities and maintenance of new and existing facilities based on Regional Board findings. If additional resources are available, activities will be expanded to other Regions.
Track and Monitor 576	Pursue a water quality indicator test specific for human pathogens (e.g., evaluate utility of switching from total and fecal coliform indicators to enterococcus as an indicator of public health risk related to vessel sewage).	SWRCB	The SWRCB has begun working with DHS to develop rapid diagnostic tests to measure levels of bacterial contamination in waters adjacent to public beaches. The intent is to develop methods that reduce sampling processing time and make possible more timely health risk warnings.		Continue with method development.

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 4.1H Assessment, Siting, and Design - Waste Management Facilities

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 634	Assess existing hazardous waste disposal and used oil recycling services available to California boaters in order to identify gaps in service.	CCC	The CCC has assessed existing hazardous waste disposal and used oil-recycling services available to California boaters in order to identify the gaps in service. In 1998 and 1999, the CCC conducted two surveys of available used oil collection and hazardous waste disposal services in the San Francisco Bay and three Southern California counties. The surveys found that 40-45% of marinas provided used oil recycling and 10% or less provided hazardous waste disposal for boaters. Subsequently, the CCC produced a report on the "Performance of oil-related service for Boaters at California Marinas" in 2001. The CCC has also obtained funding to develop a map of California marinas and the environmental services that they provide and that are located nearby in order to assist the California Integrated Waste Management Board (CIWMB) in conducting a needs assessment for oil-related services at marinas in California. This assessment will assist the Board in targeting monies available for the installation of such services to the marinas where they are needed.	Lack of stable, continuous funding. Depends on yearly grant funding. Funding insecurity hampers long-term planning and projects.	Continue to seek funding for CCC' s boating education efforts. Continue to host CCBN meetings and conduct the Boating Clean and Green Campaign. Promote education among the participants.
Assess 638	Assess the need to educate California boaters regarding proper hazardous waste management and disposal, including the availability of existing hazardous waste disposal and used oil recycling services.	CIWMB	The assessment was completed. Boaters surveyed to assess needs of educating the boating community.		Map available environmental services at marinas.
Coordinate 646	Participate in multi-agency and multi-jurisdictional task groups such as CCBN.	CCC	CCC water quality staff have participated in many multi-agency and multi-jurisdictional task groups that serve to implement the goals of the California NPS Plan including the CCBN, Morro Bay NEP Shellfish TAC, the Beach Water Quality Workgroup, Los Angeles Region Contaminated Sediments Task Force, Monterey Bay Water Quality Protection Program and others.	Ability to participate depends on yearly grant funding and availability of staff resources. The current statewide hiring freeze may preclude ongoing participation in some of these groups.	Continue to participate and provide leadership to CCBN, Morro Bay NEP Shellfish TAC, the Beach Water Quality Workgroup, Los Angeles Region Contaminated Sediments Task Force, Monterey Bay Water Quality Protection Program and others.

Coordinate 647	Participate in multi-agency and multi-jurisdictional task groups such as the CCBN and Morro Bay NEP Shellfish TAC (related to abandoned/derelict vessels).	CSLC	Participation in State marina Mapping Group, IACC Marinas Subcommittee, Lake Tahoe Environmental Improvement Program Implementation Assessment Task Force, Tahoe Regional Planning Agency Shorezone Review Committee (interagency coordination effort established to facilitate review of Shorezone Review Committee (interagency coordination effort established to facilitate review of shorezone development applications), and, when possible, CCBN and other interagency efforts. There has been enhanced coordination in marina-related activities.	Lack of dedicated water quality staff and funding as discussed above.	Continue active participation when feasible.
Track and Monitor 652	Evaluate participation in Clean Boating program and Conduct Boater Education Programs.	CIWMB	Boaters educated throughout the state through contracts with the California Coastal Commission. Between 1997 and 2002 the Coast Guard Auxiliary Dockwalker volunteers distributed boater education kits to 47,000 boaters at marinas and boat shows. 450 oil recycling signs were installed at boat launch ramps and 150 oil recycling signs were posted at marina fuel docks.		Continue ongoing activities.
Track and Monitor 651	Grants tracking databases in place.	CIWMB	The Grants Tracking database is complete.		GIS map Marinas with oil and Household Hazardous Waste collection facilities

Management Measure 4.2B Operation and Maintenance - Fish Waste Control

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1290	In partnership with other agencies, determine whether fish waste is a problem, and if so, determine methods to address it.	BCDC	Staff has held discussions with various agencies and determined that this activity is not warranted at this time.		This activity is listed for 02-03 but will not be included in the next five-year plan.

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 4.2D Operation and Maintenance - Petroleum Control

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 603	Design and develop oil absorption and educational materials.	CIWMB	The CIWMB contracted with the CCC to develop and implement the CA Clean and Green Boating Campaign in which volunteer Coastal Auxiliary Dockwalkers distribute kits to boaters that include oil absorbent bildge pads, oil recycling and boat maintenance brochures, tide books etc.		Continue ongoing activities.
Implement 1358	Respond to Spills and Illegal discharges: Respond to oil spills, inland spills, and discharges that affect state waters.	DFG	Office of Spill Prevention and Response, responds to all marine oil spills and all inland spills and discharges that affect waters of the state. 2,262 spills involving water, were reported in 2002. Over half of those were petroleum.		Continue ongoing activities.

Management Measure 4.2E Operation and Maintenance - Boat Cleaning and Maintenance

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 598	Identify marinas throughout the State for boater education program.	CIWMB	The CCC surveyed 174 marinas known to provide oil-related environmental services and personally contacted many other marina operators to determine if they conducted oil recycling outreach to boaters.		
Assess 594	Identify water bodies on CWA §303(d) list that are listed for copper, tributylin, detergents (or other indicators related to boat cleaning and maintenance) and that are potentially affected by discharges at marinas.	SWRCB	A Marinas Mapping Project is currently developing GIS maps of all marinas. Once completed, it will be possible to identify those marinas located in §303(d) listed waterbodies. RWQCB 9 is working on a copper TMDL and marinas permit	Lack of Resources	Continue Ongoing Activities.
Coordinate 606	Develop recommended ordinance language regulating marinas and recreational boating activities.	CCC	The WQ Unit has worked with staff planners on incorporating appropriate language into the ordinances that regulate marina activities on a case-by-case basis.	While generalized guidance has been provided to CCC staff planners, no consensus has been achieved on a model ordinance that works for most marina and recreational boating activities.	Continue working with staff planners to review LCPs where NPS pollution from marinas is a concern, and incorporate appropriate language where necessary.

Coordinate 607	Develop and regularly maintain a "clearinghouse" of boat cleaning and maintenance information.	CCC	The CCC has developed and regularly maintains a clearinghouse of boat cleaning and maintenance information and provides access to such information on its website. In addition, the Boating Clean and Green Campaign of the CCC has produced and distributed the following booklet to marinas, boat supply shops, boat yards, boating associations, and contractors throughout the state: “Clean Green Boat Maintenance: a Pollution Minimization Checklist for boat maintenance contractors and the do-it-yourself boater.”	The lack of funding and staff resources is always a concern. In addition, the first draft of the Clean Marinas Guidebook was considered too regulatory by the stakeholders. The CCC is strengthening its outreach efforts in revising the guidebook. An advisory committee has been established. The issues of siting and design are being removed from the guidebook. Instead, the focus will be on marina operation and maintenance.	Continue to seek funding opportunities and work with stakeholders in finalizing the Clean Marinas Guidebook.
Plan 602	Develop plans for coordinated pollution prevention outreach to all boaters and marinas.	CIWMB	Developing BMP Guidebook for Boaters.		Continue Ongoing activities.
Plan 601	Develop copper TMDL; assess non-toxic hull paints, develop video for divers; assess diver BMPs; consider review of copper hull paint registration.	RWQCB9	Shelter Island Yacht Basin TMDL for copper is nearing completion but has not yet been adopted by the SDRWQCB. A §319(h) grant assessed hull clearning BMPs. Another §319(h) grant is a non-toxic hull paint demonstration project and includes developing a video for divers.	Development of TMDLs is a time consuming, resource intensive, bureaucratic process. There are also stakeholder issues.	Continue TMDL development; continue non-toxic hull paint demonstration project.
Implement 621	Compile a list of options for less toxic products and distribute them through marinas, boatyards, and marine products stores.	CCC	The CCC has produced a list of household alternatives to typical boat cleaning and maintenance products found at stores. This guide is posted on the CCC' s clean boating website. Furthermore, the Department of Boating and Waterways developed a similar list in its booklet, "Clean Boating Habits" which the CCC' s "Dockwalkers" distribute as part of the boater it’s the CCC has developed. To date, 7,000 Clean Boating Habits booklets have been distributed by Dockwalkers to California boaters.	Lack of resources.	Continue to provide up-to-date information in a user-friendly manner. Investigate the possibility of co-sponsoring legislation that prohibits the sale and use of toxic hull paints.

Implement 631	Number of marina boater education/used oil collection programs funded by CIWMB.	CIWMB	Hundreds of boater education and marina used oil collection programs have been funded by CIWMB Used Oil Block, Local Government Opportunity and Non-Profit grants to local governments and non-profits. The CIWMB also provided contract funds to the CA Coastal Commission to manage the CA Clean and Green Boating Campaign, a statewide program that educates boaters about used oil/hazardous waste recycling.		Continue tracking of grants.
Implement 612	Implement short-course hull-cleaning training and certification programs and policies using a 2-tier program based on: Tier 1: Self-certification program approved by SWRCB and CCC with specific targets (e.g., 75 percent of boat cleanings in region done by certified divers after four years); Tier 2: Regional certification (trigger to develop regional certification would be if self-certification program fails to meet identified targets).	RWQCB2	Not Completed due to lack of funding.	Lack of funding for RWQCB to complete this task	May reconsider 2-tier hull-cleaning certification program as funding becomes available.
Implement 613	Implement short-course hull-cleaning training and certification programs and policies using a 2-tier program based on: Tier 1: Self-certification program approved by SWRCB and CCC with specific targets (e.g., 75 percent of boat cleanings in region done by certified divers after four years); Tier 2: Regional certification (trigger to develop regional certification would be if self-certification program fails to meet identified targets).	RWQCB3	None	Inadequate resources	Conduct activity if resources become available.

Implement 614	Implement short-course hull-cleaning training and certification programs and policies using a 2-tier program based on: Tier 1: Self-certification program approved by SWRCB and CCC with specific targets (e.g., 75 percent of boat cleanings in region done by certified divers after four years); Tier 2: Regional certification (trigger to develop regional certification would be if self-certification program fails to meet identified targets).	RWQCB4	Program in development at Regional Board 4 marinas through §319(h) contract. Trainers have been trained and BMP list in development.		Program shall be implemented by Fall 2004.
Implement 627	Implement TMDL for copper.	RWQCB9	Development of TMDL for copper in Shelter Basin is nearing completion but has not yet been approved by the SDRWQCB.	Development of TMDLs is a time consuming, resource intensive, bureaucratic process. There are also stakeholder Issues.	Continue development of TMDL.
Implement 617	Implement short-course hull-cleaning training and certification programs and policies using a 2-tier program based on: Tier 1: Self-certification program approved by SWRCB and CCC with specific targets (e.g., 75 percent of boat cleanings in region done by certified divers after four years); Tier 2: Regional certification (trigger to develop regional certification would be if self-certification program fails to meet identified targets).	RWQCB9	There is no SWRCB-approved certification program. A training course is available from the California Professional Divers Association.	Limited staff and funding.	None.
Implement 624	Develop legislation that prohibits the sale and use of toxic hull paints, as necessary after a thorough analysis of situation.	SWRCB	No action taken due to lack of resources	Lack of Resources	Activity will take place if resources become available.

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure 4.3 Education/Outreach

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 654	Assess existing public education and outreach programs efforts related to marina and boating.	CCC	CCC Public Education staff have been assessing the existing public education and outreach programs efforts related to marina and boating over the last five years. CCC staff have founded and provided leadership in the Northern California Clean Boating Network (CCBN). The CCBN is the primary tool for evaluating and expanding clean boating education in the state. Since the CCC started the CCBN in 1995, it has grown to become a three chapter organization with a website and a newsletter. The three chapters each meet quarterly. The facilitators of each of the chapters have monthly coordinating teleconferences during which they develop agenda items, share new program information, and plan new issues of the CCBN newsletter, The Changing Tides.	Lack of stable, continuous funding. Depends on yearly grant funding. Funding insecurity hampers long-term planning and projects.	Continue to host CCBN meetings. Promote education among the participants. Continue to seek funding for CCC' s boating education efforts.
Assess 657	Assess existing marina and recreational boating pollution prevention and control programs regionally and/or statewide.	CCC	The CCC has assessed existing hazardous waste disposal and used oil-recycling services available to California boaters in order to identify the gaps in service. In 1998 and 1999, the CCC conducted two surveys of available used oil collection and hazardous waste disposal services in the San Francisco Bay and three Southern California counties. The surveys found that 40-45% of marinas provided used oil recycling and 10% or less provided hazardous waste disposal for boaters. Subsequently, the CCC produced a report on the “Performance of oil-related service for Boaters at California Marinas” in 2001. The CCC has also obtained funding to develop a map of California marinas and the environmental services that they provide and that are located nearby in order to assist the California Integrated Waste Management Board (CIWMB) in conducting a needs assessment for oil-related services at marinas in California. This assessment will assist the Board in targeting monies available for the installation of such services to the marinas where they are needed.	Lack of stable, continuous funding. Depends on yearly grant funding. Funding insecurity hampers long-term planning and projects.	Continue to host CCBN meetings and conduct the Boating Clean and Green Campaign. Promote education among the participants. Continue to seek funding for CCC' s boating education efforts.

Assess 658	Define need for boater education regarding the proper management and disposal of hazardous waste.	CIWMB	Surveys conducted to develop proper management and disposal of hazardous waste techniques among boaters. With funding from the CIWMB, the Santa Monica Bay Restoration Project surveyed 15,000 boaters in 4 southern CA counties and determined that 76% changed the oil themselves in their boats.		Increase Household Hazardous Waste disposal education.
Assess 656	Assess existing pollution prevention and control programs regionally and/or statewide.	DBW	The DBW participated in SWRCB marinas workshops. Workshops help assess existing and needed information.	Expansion requires additional staffing and funding - which were not available.	
Coordinate 672	Continue implementation of the CCC' s Boating Clean and Green Campaign	CCC	The Campaign has implemented its outreach to boaters through: development of two clean boating websites; maintaining a database of environmental services for boaters at marinas and publishing it on websites and the clean boating Tide Tables; development of boaters kits; training of Dockwalkers who distribute the kits; attendance at boat shows and events; development and distribution of clean boating signs and displays, boat maintenance checklists, and informational charts; production of the northern California Changing Tides edition; and the development of a California Clean Marinas Guidebook.	The CCC did not conduct an inventory of existing data on water quality conditions at marinas (MM 4.1A Water Quality Assessment) because no funding was obtained for this task.	Continue to seek funding for CCC' s boating education efforts. Continue to host CCBN meetings and conduct the Boating Clean and Green Campaign. Promote education among the participants.
Coordinate 609	Identify and contact local agencies to coordinate educational efforts.	CIWMB	The CIWMB contracted with the CA Coastal Commission (CCC) to set up the CA Clean Boating Network, a group of more than 300 members including CIWMB grantees and public agencies that conduct boater outreach and marina and boating stakeholders who share information regarding Best Management Practices (BMP) for boaters. The CCC also manages the "Partnership for Clean Marinas," a group of pubic and private stakeholders engaged in developing a clean marina recognition program.		

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 1392	Determine and implement education/outreach programs for public education about impacts from marinas and recreational boating to help reduce NPS pollution.	DPR	Prescribed in surveyed watersheds where appropriate MPs are determined.	These tasks are contingent upon acquiring new positions or the ability to redirect existing positions and additional funding support.	
Target 664	Expand education programs: provide assistance in applying for CVA funds.	DBW	The DBW continued existing CVA grant assistance program. Expansion was not necessary.	None	
Target 662	Expand education programs: aimed at marina operators to promote pumpout facilities and to get commitment to install new pumpouts.	DBW	The DBW continued existing CVA grant program. Expansion was not necessary.	None	
Target 663	Expand education programs: provide boaters with educational information on NPS pollution issues.	DBW	The existing coastal education programs were continued	Expansion requires additional staffing and funding, which was not available.	
Target 668	Develop education program where divers who clean boats inform boat owners that they work in the water so please do not pollute, and divers provide information about less toxic bottom paints.	RWQCB9	Eduction about non-toxic paint provided through §319(h) grant to UC Cooperative Extension.	Difficult to change from long-standing practices and familiar materials; limited staff and funding.	§319(h) grant project ongoing.
Implement 684	Post-educational information at boat ramps and other areas.	CCC	The CCC Public Education unit posted 450 signs at boat launch ramps in 2000 describing the location of sewage pumpouts and information on disposal of oil and hazardous wastes. The information was posted in English and Spanish. In 2002, 150 signs were posted at fuel docks explaining safe and environmentally sound practices for fueling of boats.	Funding is always the major obstacle.	Continue to seek funding for the Boating Clean and Green Campaign. Continue to coordinate with other stakeholders in promoting the Campaign.

Implement 680	Continue expansion of education projects and dissemination of materials.	CCC	CCC public education staff has continued to provide education to boaters. through the CCBN, the Dockwalkers program and the Boating Clean and Green Campaign. An assessment of the existing hazardous waste disposal and used oil-recycling services available to boaters was performed. As a result, a report on the "Performance of Oil-Related Service for Boaters at California Marinas" was completed in 2001. The CCC has also obtained funding to develop a map of California marinas and the environmental sources that they provide and that are located nearby.	Lack of stable, continuous funding. Depends on yearly grant funding. Funding insecurity hampers long-term planning and projects. In addition, finding suitable and willing partners in these education programs is a key for the continuing success of these programs.	Continue to participate and sponsor all these events. Continue to expand Snapshot Day to more locations. Continue to explore different funding possibilities. Continue to host CCBN meetings and conduct the Boating Clean and Green Campaign. Integrate the NPS and BMP information for marinas and recreational boating into the CCC' s overall NPS information clearinghouse.
Implement 681	Conduct public outreach to promote marinas and recreational boating pollution reduction strategies.	CCC	The CCC's Boating Clean and Green Campaign is an education and outreach program that promotes environmentally sound boating practices to marine business and boaters in California. Started in April 1997, the Campaign conducts boater education throughout the state in partnership with many public and private agencies that share a concern about educating boaters about environmentally sound boating practices. As part of its efforts to promote clean green boating, the CCC facilitates the northern California chapter of the California Clean Boating Network (CCBN), trains "Dockwalkers" to conduct face-to-face boater education, and influences the purchasing power of boaters through its "Shopping Clean and Green" project.	Lack of stable, continuous funding. Depends on yearly grant funding. Funding insecurity hampers long-term planning and projects.	Continue to seek funding for CCC' s boating education efforts. Continue to host CCBN meetings and conduct the Boating Clean and Green Campaign. Promote education among the participants. Integrate the NPS and BMP information for marinas and recreational boating into the CCC' s overall NPS information clearinghouse.
Implement 691	Conduct boater education program.	CIWMB	Boater' s education throughout the state.		Continue education efforts.
Implement 690	Fund the design, development, and distribution of clean boating educational materials.	CIWMB	Funds dispersed to CCC who conducts Boater Education through the Coastguard Auxillary Volunteer organization.		Continue education efforts.

Implement 702	Provide NPS management materials and educational information (e.g., dockwalker presentations) at CSLC-leased marinas, boat launches, and/or boat shows.	CSLC	The outreach was conducted. There was limited distribution of Dockwalker materials.	Lack of dedicated water quality staff and funding.	Begin active participation when feasible.
Implement 686	Post-educational information at boat ramps and other areas.	DBW	Information has been posted through education groups.	Staffing and funding were obstacles.	
Implement 693	Include NPS education component in Boating Law Enforcement training courses.	DBW	The NPS component was implemented.	None	
Implement 708	Provide standards and regulations for ocean beaches and ocean water contact sports areas.	DHS	Adopted regulations for ocean beaches in July 1999. Guidance for freshwater beaches published in 1997; revised July 2001.	None.	Update guidance as necessary.
Implement 709	Regulate water quality of commercial shellfish beds.	DHS	Pathogens are monitored monthly. Sanitary surveys for watersheds have been completed and are updated annually.	None.	Continue monitoring and sanitary survey updates.
Implement 682	Conduct education workshop.	RWQCB2	Activity not completed.	Lack of funding for RWQCB 2 to complete this task.	Will be managing Prop 13 contract for Bay Keeper to do outreach activities.
Implement 679	Public campaign to encourage boaters to use pump outs.	RWQCB5	13 participating marinas distributing laminated fact cards, campaign handouts, maps of pump-out locations, and floatable key chains to boaters.		
Track and Monitor 704	Track number of used oil certified centers.	CIWMB	Approximately 2700 used oil certified centers were tracked. 150 CA marinas currently provide used oil collection facilities to boaters and 112 marinas provide oil absorbent pad collection.		Continue tracking of oil certified centers

Section V
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Management Measure All-M All Marinas Measures

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1275	Determine whether existing methods for addressing marina pollution problems adequately address marina MMs.	BCDC	BCDC wrote a proposal and was awarded a NOAA Coastal Fellow for 2 years to develop a pilot marina monitoring program for SF Bay marinas; Regional Board, State Board, and Coastal Commission all participate on the Task Force along with other federal, State and local agencies, boating organizations, and environmental organizations.		Staff will continue to hold Task Force meetings; include specific task for marina monitoring study in next five-year plan.
Assess 245	Conduct site visits; identify onsite MMs/MPs; assess need/feasibility of adding NPS MPs.	CSLC	The CSLC develops grant proposals to assess CSLC lands to determine if and to what degree these lands contribute to water quality impairments. partnership with DPR, was awarded a grant that includes the following tasks: conduct site visits; identify onsite MMs/BMPs; assess need/feasibility of adding NPS MMs/BMPs. In Spring 2003, a list of CSLC marinas was forwarded through the Marina Mapping Project workgroup to OSPR staff who are conducting site visits at State marinas in Summer 2003. In 2000, CSLC Marine Facilities Division staff conducted site visits at 36 CSLC-leased marinas with fuel docks to determine if MTBE could pose a water quality program.	Major work on task didn' t begin until after grant received (September 2002). No current roadblocks.	Complete grant tasks (by March 2004) including site visits, with the goal to identify existing and needed MMs/BMPs, then develop Action Plan to address runoff from CSLC Lands. Review of OSPR marina site visits will be incorporated into this effort.
Assess 470	Assess whether or not adequate enforcement powers exist for and are being implemented by federal, State and/or local enforcement.	RWQCB6	Staff participated in TAC for marinas in Tahoe Basin.	Limited resources.	Continue activities.
Coordinate 1276	Coordinate with the Regional Board on implementation of marina MMs.	BCDC	BCDC wrote a proposal and was awarded a NOAA Coastal Fellow for 2 years to develop a pilot marina monitoring program for SF Bay marinas; Regional Board, State Board, and Coastal Commission all participate on the Task Force along with other federal, State and local agencies, boating organizations, and environmental organizations.		Staff will continue to hold Task Force meetings; include specific task for marina monitoring study in next five-year plan.

Coordinate 1393	Revise BCDC' s MOU with the Regional Board and State Board.	BCDC	Staff has worked closely with the State and Regional Board staff to assure development of similar or compatible policies. For example, the Regional and State Board staff participate on the Recreational Boating Nonpoint Source Task Force and workshops that BCDC hosts and BCDC staff participate on the Interagency Coordinating Committee and the subcommittees that the State Board hosts.	NPS MOU attachment for marinas, since the Marina monitoring study is a 2-year project. It is important to wait until the end of the study to determine roles of the participating agencies with regard to marinas; likewise, the water quality Bay Plan Amendment process needs to be complete before the NPS language can be updated; further, management needs to agree to any updates.	Staff will continue to work with these agencies to update the nonpoint source attachments to the MOU.
Coordinate 532	Establish clear lines of authority for enforcement of violations.	RWQCB6	Not established.	Limited resources.	Conduct activity if resources become available.
Plan 1281	Review San Francisco Bay Plan Recreation findings and policies pertaining to marinas and polluted runoff.	BCDC	BCDC wrote a proposal and was awarded a NOAA Coastal Fellow for 2 years to develop a pilot marina monitoring program for SF Bay marinas; Regional Board, State Board, and Coastal Commission all participate on the Task Force along with other federal, State and local agencies, boating organizations, and environmental organizations.	Marina and boating organizations expressed that it is not known whether NPS in SF Bay marinas is a problem, and if so, to what extent. There is a need for studies.	Staff will continue to hold Task Force meetings; include specific task for marina monitoring study in next five-year plan.
Plan 1359	Response to Spills and Illegal discharges: Office of Spill Prevention and Response (OSPR) has been developing a database to better track incidents by substance, size, site, those that involve waters of the state, by county, etc.	DFG	Database should be up and fully running by 12/03.		Continue database development.
Target 254	Target and schedule assessment in watersheds with §303(d) -listed waters, scheduled TMDLs, and/or Endangered Species Act-listed anadromous salmonids.	DOC	TMDL watersheds were selected for project mapping.	Unknown	Continue Ongoing Activities.

Implement 1360	Remediation of Spills and Illegal Discharge Pollution Sites: respond to spills that require remediation.	DFG	Office of Spill Prevention and Response (OSPR) responded to 2,262 spills that required remediation activity. A portion of those also required further restoration. Statistics are available on the status and progress for each project.		Continue ongoing activities.
Implement 1362	CEQA duties as Trustee or Responsible Agency: DFG has established a program for reviewing CEQA projects for impacts to fish and wildlife.	DFG	The program reviewed over 13,000 projects for 2001- 2002.		Continue ongoing activities.
Implement 1363	CEQA duties as Trustee or Responsible Agency: CEQA follow-up monitoring.	DFG	DFG has done no CEQA follow-up monitoring.	Lack of resources and funds.	
Implement 1364	NPS Pollution Prevention of DFG-owned lands: Complete Management Plans for DFG-owned lands.	DFG	DFG continues to make progress in this area. Management Plans have been completed for approximately 47% of DFG-owned lands. No NPS problems have been identified.		Continue ongoing activities.
Implement 1365	NPS Pollution Prevention of DFG-owned lands.	DFG	No NPS problems on DFG-owned lands have been identified.		
Implement 562	Meet minimum standards through enforcement programs and effectively enforce violations.	RWQCB6	Staff presented information on marina and boating management measures at public meetings.	Limited resources.	Continue activity.
Track and Monitor 1361	Follow-up Monitoring at Spill and Illegal discharge Sites.	DFG	OSPR through the incident command insures that all remediation has taken place. For those projects that require further restoration, each project is tracked until full recovery is achieved.		Continue ongoing activities.

SECTION VI
PROGRESS DISCUSSION
HYDROMODIFICATION CATEGORY
July 2001 – June 2003

A. INTRODUCTION

Healthy streams and rivers serve many functions, including: ensuring reliable water supplies for human needs; providing habitats for fish and wildlife; conveying flood discharges; replenishing beaches with sand; and supplying enriching sediments to downstream wetlands and estuaries. When channel modification activities are undertaken to straighten, enlarge, deepen or relocate the channel, these activities can affect water temperature, change the natural supply of fresh water to a water body, and alter rates and paths of sediment erosion, transport, and deposition, resulting in excessive erosion or deposition. Hardening the banks of waterways with shoreline protection or armor accelerates the movement of surface water and pollutants from the upper reaches of watersheds into coastal waters. Channelization can also reduce the suitability of instream and streamside habitat for fish and wildlife by depriving wetlands and estuarine shorelines of enriching sediments, affecting the ability of natural systems to filter pollutants, and interrupting the life stages of aquatic organisms (USEPA, 1993).

Dams can adversely impact hydrology and the quality of surface waters and riparian habitat in the waterways where the dams are located. For example, improper siting of dams can inundate both upstream and downstream areas of a waterway. Dams reduce downstream flows, thus depriving wetlands and riparian areas of water. During dam construction, removal of vegetation and disturbance of underlying sediments can increase turbidity and cause excessive sedimentation in the waterway.

Excessively high sediment loads resulting from streambank or shoreline erosion can smother submerged aquatic vegetation, cover shellfish beds and tidal flats, fill in riffle pools, and contribute to increased levels of turbidity and nutrients.

The SWRCB, CCC, and other State agencies have identified seven management measures (MMs) to address hydromodification sources of nonpoint pollution affecting State waters. Hydromodification includes modification of stream and river channels, dams and water impoundments, and streambank and shoreline erosion.

The activities that the IACC developed since 1998 with respect to the Hydromodification Category are tabulated in the Activity Summary Table of this Section. These activities, as they relate to the Hydromodification MMs have been scored, in an effort to describe the level of completeness with which each MM was addressed. The scoring included an identification of each activity as being 'Complete', 'Partially Complete', or 'Not Performed'. A summation of these activity scores is provided in Table VIA, below.

TABLE VIA
TALLY OF ACTIVITIES ADDRESSING
HYDROMODIFICATION MMs

	Completion Status			Total
	Complete	**Partial**	**Not Performed**	
Hydromodification Management Measures				
Activities addressing all Categories	56	40	20	**116**
Activities addressing all Hydromodification MMs	18	14	4	**36**
5.1 Channelization/Channel Modification				**0**
A. Physical and Chemical Characteristics of Surface Waters				**0**
B. Instream and Riparian Habitat Restoration				**0**
5.2 Dams				**0**
A. Erosion and Sediment Control	1	3		**4**
B. Chemical and Pollutant Control				**0**
C. Protection of Surface Water Quality and Instream and Riparian Habitat				**0**
5.3 Streambank and Shoreline Erosion				**0**
A. Eroding Streambanks and Shorelines				**0**
5.4 Education/Outreach				**0**
A. Educational Programs				**0**
Hydromodification Totals:	**75**	**57**	**24**	**156**

In general, it can be said that 75, out of 156 (or approximately 48%) of the listed activities were completed for the NPS Program. Furthermore, about 85% of the listed activities were either partially or completely accomplished. What these statistics tells us with respect to the completeness of MM implementation, and its affect on beneficial uses and water quality remains undefined. This inability to effectively determine the level of completeness of MM implementation is something that is being addressed through the MM Tracking Project, which is currently taking place in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

B. HYDROMODIFICATION CATEGORY OBJECTIVES

Beginning in June of 2002, the SWRCB, CCC and other IACC agencies initiated the process of identifying Hydromodification Category Objectives that would not only address future planning efforts, but would also address the activities that agencies have been conducting since 1998. The objectives that were developed are intended to be realistic to the limitations of time and resources, yet lead toward the ultimate goal of full Hydromodification MM implementation. These objectives are listed below:

a. Maintain and restore the physical and chemical characteristics of streams, riparian habitats, and their associated beneficial uses with consistent statewide stream protection policy.
b. Develop information on MP implementation to ensure consistent requirements, implementation, and effectiveness of mitigation and restoration projects.
c. Prevent and control streambank, shoreline and beach erosion with a consistent statewide policy and watershed approach.
d. Promote interagency collaboration in habitat restoration projects and continue to improve upon and expand partnerships and coordination in tackling the issue of eroding streambanks and shorelines.

e. Enhance outreach and promote information exchange among State agencies, local entities, and interested parties.
f. Continue to assess waterbodies, identify sources of NPS impacts from hydromodification activities as well as increase inspections.
g. Develop and implement watershed-based plans, including TMDLs in order to identify and address impacts from hydromodification activities.
h. Streamline the permitting process for wetland and riparian protection and restoration projects, including swift measures for invasive species eradication.

The activities that are listed in the Activity Summary Table of this Section, and their scores, have also been correlated to the new Hydromodification Category Objectives. The summation of these activities and their completion status is provided in Table VIB below.

TABLE VIB
TALLY OF ACTIVITIES
ADDRESSING FUTURE
HYDROMODIFICATION CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
Hydromodification Management Measures	**Hydromodification Activity Tallies**		
a) Maintain and restore the physical and chemical characteristics of streams, riparian habitats, and their associated beneficial uses with consistent statewide stream protection policy.	4	7	1
b) Develop information on MP implementation to ensure consistent requirements, implementation, and effectiveness of mitigation and restoration projects.	3	4	1
c) Prevent and control streambank, shoreline and beach erosion with a consistent statewide policy and watershed approach.	8	2	0
d) Promote interagency collaboration in habitat restoration projects and continue to improve upon and expand partnerships and coordination in tackling the issue of eroding streambanks and shorelines.	5	6	2
e) Enhance outreach and promote information exchange among State agencies, local entities, and interested parties.	6	2	0
f) Continue to assess waterbodies, identify sources of NPS impacts from hydromodification activities as well as increase inspections.	1	1	0
g) Develop and implement watershed-based plans, including TMDLs in order to identify and address impacts from hydromodification activities.	5	2	1
h) Streamline the permitting process for wetland and riparian protection and restoration projects, including swift measures for invasive species eradication.	0	0	0
Total Hydromodification:	**32**	**24**	**5**

C. ISSUES AND CHALLENGES

The full implementation of the NPS Hydromodification MMs, and resulting protection of water quality in the State, faces many significant challenges. These include issues of severe State budget shortages, as well as the challenge of coordinating multiple stakeholders that share the responsibility and interest in preventing and minimizing the harmful effects of hydromodification practices.

Similar to MMs in other NPS land use categories, budget shorfalls continue to impact efforts to protect and restore streams, rivers and shorelines. The situation is made worse by the fact that hydromodification and restoration projects often require long-term monitoring. Budget shortages for

the regulatory agencies, for example, undercut their ability to follow up, evaluate, and regulate appropriately. Restoration projects can also be very costly to implement. One example of a project that has been set aside due to funding concerns is the State Coastal Conservancy's (SCC) feasibility study to remove unnecessary dams. The SCC funded the initial analysis of removal of three dams in coastal watersheds; the San Clemente Dam on the Carmel River, Matillja Dam on the Ventura River, and the Rindge Dam on Malibu Creek. Unfortunately, the lack of funding and staff shortages have prevented the SCC from completing the feasibility studies.

Finally consistent statewide hydromodification policy and requirements for mitigation and restoration projects are lacking. The complexity of issues in the fields of fluvial geomorphology and coastal engineering had made it difficult to craft one-size-fits-all solutions. There nevertheless exists an urgent need to synthesize the available information regarding hydromodification into coherent principles with readily applicable rules that are tangible to both the regulatory and regulated communities alike. It is a daunting effort that requires field expertise, sound policy judgment, and tireless outreach. The State has, however, continued to approach this difficult task, and one success example is discussed in the section below.

D. HYDROMODIFICATION TOPIC FOR DISCUSSION

A Primer on Stream and River Protection

The RWQCB2 example that is summarized here, represents one agencies success at addressing the urgency of issues in the Hydromodification land use category. RWQCB2 has succeeded in clarifying and organizing very technical stream and river protection principles and providing useful guidelines for their implementation.

As a first step to ensure protection of streams through its regulatory and grant programs, and increase efficiency of the application process, the RWQCB-2 staff has developed a technical reference circular (Circular) entitled "*A Primer on Stream and River Protection for the Regulator and Program Manager*" (April 2003). The purpose of the Circular is to help agency staff and permit applicants recognize the linkages between water quality and sound physical attributes of a stream or river such as vegetation, flow characteristics, and stable channels and banks. Because it is a primer, the object is to translate a complicated field of river science into some generalizations that the relative novice to river science can apply to regulatory and program management issues. The Circular applies concepts, based on two decades of scientific and engineering advancements, on the conditions needed both for lower maintenance and for more sustainable and stable river channels. The Circular is a response to the water quality engineers and biologists who have recognized the necessity to address the physical conditions of a stream channel, its floodplain and riparian corridor, in order to protect and improve the quality of the State's waters. To publicize the result, the RWQCB-2 staff has held several briefings for their Board as well as public workshops and presentations to local agency and watershed groups.

E. NEXT STEPS

The Five-Year Plan for Hydromodification provides some structure, which can be used to address NPS pollution in areas intended for hydromodification, or where it has already occurred. It is anticipated that continuation of the many efforts to address collaboration, such as the IACC will improve the chances for improved relations and greater water quality protection. Other activities that will be key to the ability of the NPS Program to evaluate it's effectiveness.

Continuing with their aforementioned success, the RWQCB2 is proposing amendments to its Basin Plan to update the stream and wetland protection programs, recognizing new directions in urban runoff and water quality certification permitting programs that link functions of streams and wetlands to attainment of water quality standards. The proposed amendments include two beneficial uses of streams and wetlands: water quality enhancement (WQE) and flood peak attenuation/flood water storage (FLD). These beneficial uses explicitly recognize that physical attributes of waterbodies contribute to better water quality, and that these physical attributes need to be protected through the RWQCB's permitting programs in order to achieve its mission of protecting all beneficial uses of the jurisdictional waterbodies. The proposed amendments also include five narrative water quality objectives (WQOs) related to protecting the WQE and FLD beneficial uses: hydrology, active channels, riparian corridors, floodplains, and buffer zones. These WQOs are implemented through specific permitting programs listed in the proposed amendments.

In order to protect FLD and WQE beneficial uses and implement the corresponding water quality objectives for streams, the RWQCB is: 1) developing a scientific and institutional framework for protection of streams within a watershed context, 2) developing performance objectives to guide the protection and improvement of stream functions, 3) improving the application of consistency and effectiveness of regulatory authority, 4) where needed, developing additional technical tools for the regulatory and regulated communities to address stream protection, and 5) developing watershed management strategies for permit programs.

The RWQCB-2 plans to implement the WQOs for streams by applying specific performance objectives to guide the design and conduct of project proposals. Specific performance standards will be applied as appropriate, on a case by case basis, to meet the performance objectives and retain the flexibility required to address a wide diversity of site conditions, through the Section 401 water quality certification, TMDL, nonpoint source, NPDES stormwater and other Regional Board water quality programs.

The RWQCB-2, in consultation with other agencies and experts, including local watershed organizations, will develop and make information available on stream management, planning and protection processes and methods. This includes ongoing training of staff in watershed and river sciences and development of technical tools for project reviews; training for farm and range managers, developers, local government, consultants, watershed organizations, and other stakeholders; and development of consistent, logical and easily understood circulars to assist designers, planners, land managers, and restorationists. The RWQCB will also develop outreach materials for planners, CalTrans and other public agencies, and local public works departments. An example of these technical assistance and public outreach is the previously described primer on stream and river protection for the regulators and program managers.

Section VI
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Hydromodification

Management Measure 5.2A Dams - Erosion and Sediment Control

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 411	SCC currently funding the analysis of removing unwanted and unneeded dams in three coastal watersheds: Carmel River, Ventura River (Matilija Dam) and Malibu Creek (Rindge Dam).	SCC	Three dam removal feasibility studies underway.	Project staffing.	Complete dam removal feasibility studies; Program Proposition 40 funds.
Coordinate 415	SCC coordinates with project sponsors and responsible permitting and review agencies.	SCC	Coastal Conservancy involved with major partner organizations, including public landowners, Bureau of Reclamation and CA Department of Parks and Recreation. Coastal Conservancy coordinating with interested stakeholders.	Project Staffing.	Continue to coordinate with major partner organizations.
Plan 413	Current pre-project analyses will determine extent, timing and scope of developing individual dam removal plans.	SCC	Current pre-project analyses will determine extent, timing and scope of developing individual dam removal plans.	Project staffing.	Complete dam removal feasibility studies; Program Proposition 40 funds.
Implement 417	Current pre-project analyses will determine extent, timing and scope of developing individual dam removal plans. SCC funding of the analysis of removing unwanted and unneeded dams in three coastal Watersheds.	SCC	Currently three major coastal dam removal feasibility studies in process: San Clemente Dam on Carmel River; Matillija Dam on Ventura River; and Rindge Dam on Malibu Creek.	Funding and Project Staffing.	Currently three major coastal dam removal feasibility studies in process: San Clemente Dam on Carmel River; Matillija Dam on Ventura River; and Rindge Dam on Malibu Creek. Complete the dam removal feasibility studies. Uses Program 40 Funds.

Management Measure All-H All Hydromodification Measures

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1116	Inventory AMLs at watershed level.	DOC	Inventory work substantially completed in 6 hydrologic areas.	Lack of funds and staff.	None anticipated.

Section VI
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Assess 1120	Funds analyses of coastal riparian projects as part of Wetland Enhancement and Watershed Restoration Plans and River Parkway Plans. Develops instream riparian restoration and enhancement projects as part of wetland and watershed enhancement project plans.	SCC	Participate with Riparian Joint Venture staff in assessing coastal needs.	Funding and Project Staffing.	Continue to participate with Riparian Joint Venture staff in assessing coastal needs.
Coordinate 1144	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB2	See items on flood control management.	Staff budget constraints and CEQA issues have delayed some permitting.	Continuing work with local agencies, Resource Conservation Districts, etc. on developing general permits.
Coordinate 1145	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB3	Activity has not been implemented within Region 3 except as permit streamlining efforts in Elkhorn and Morro Bay Watersheds. Some permit streamlining efforts in Elkhorn and Morro Bay Watersheds.	Inadequate resources to address activity.	Focus shifted to providing technical assistance for Local Coastal Plan updates to facilitate and improve resource protection.
Coordinate 1154	Conduct stakeholder workshops.	RWQCB4	Held semi-annual outreach workshops and stream restoration workshops.	Other Regional Board priorities and resource limitations.	Work with Senate Bill §401 training for completion of power point presentation.
Coordinate 1146	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB4	Held initial meetings with US Army Corps of Engineers and Department of Fish and Game.	Different agency requirements and focus.	Calleguas Creek Phase II is developing a streamlined permit process.
Coordinate 1148	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB6	Staff participates in collaborative planning groups in Mono and Inyo Counties, which consider permit streamlining and resource protection in long-range planning issues.	Limited Resources	Continue activities.
Coordinate 1149	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB7	No progress.	Limitations in Resources.	

Section VI
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 1151	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	RWQCB9	A programmatic §401 certification is in place for the Co. of San Diego culvert maintenance program; a City of San Diego canyon sewer maintenance program is pending.	Limited staff and funding; reluctance of responsible parties.	Continue to advocate such agreements.
Coordinate 1157	Involve an existing wetland/watershed stakeholder group or the formation of same or public and technical/scientific advisory committees. Projects involve local and regional partners and grantees, and will require close coordination with stakeholder partners.	SCC	Particpate with Riparian Joint Venture staff and staff of California Resources Agency to coordinate actions.	Project staffing.	Continue to participate with Riparian Joint Venture staff and staff of California Resources Agency to coordinate coastal needs; Program Proposition 40 funds.
Coordinate 1142	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources.	SWRCB	A Memorandum Of Understanding between the SWRCB and the US ACOE has been drafted. No action has been taken as of yet, due to lack of resources.	Lack of resources.	Finalize MOU
Plan 1315	Review San Francisco Bay Plan Shoreline Protection findings and policies and determine whether they should be revised to expressly address Nonpoint Source pollution.	BCDC	Proposed water quality findings and policies in BCDC's Bay Plan encourage the use of vegetation in projects to address NPS pollution.		This activity is listed for 03-04 but will not be included in the next five-year plan.
Plan 1131	Develop CEQA guidelines for wetlands and watershed analysis.	CCC	In 1998 to 2000 staff evaluated our ability to modify CEQA guidelines for wetlands and watershed analysis. Some initial attempts were made at this task. However, it was determined that the process was too cumbersome and more trouble than it was worth.	Initial efforts at this task revealed that the effort required to update CEQA guidelines for wetland and watershed analysis were beyond the scope of this program.	None.
Plan 1138	Prepare reclamation plans for abandoned mines reclaimed by other agencies.	DOC	Performed reclamation activities at 56 AML sites.	Lack of funds and staff.	
Plan 1135	Prepare staff report for Basin Plan Amendment.	RWQCB2	Staff report completed. Basin Plan amendment due in fall 2003.	Delays due to complexity of review.	Basin Plan amendment proposed for fall 2003, ongoing implementation of proposed policy.

Plan 1134	Develop criteria for protecting ecological functions and other beneficial uses of streams.	RWQCB2	Criteria identified in stream circular. Framework developed. Framework outlined in the stream circular developed for staff and regulated community.	Delays due to complexity of review.	
Plan 1133	Develop a framework linking stream functions to beneficial uses.	RWQCB2	Framework outlined in the stream circular developed for staff and regulated community.	Delays due to complexity of review.	
Plan 1136	Draft Stream Protection Policy.	RWQCB2	Draft policy has been developed and Basin Plan Amendments proposed.	Delays in timeline due to complexity of process and planning reviews.	Basin Plan amendment proposed for fall 2003, ongoing implementation of proposed policy.
Plan 1137	Participate in regional floodplain planning activities, such as Bay Area Wetlands Planning Group (BAWPG).	RWQCB2	The flooplains activities are being carried out, and efforts are maintained to carry out the Habitat.	Limited resources.	
Plan 1140	Funds the preparation of Resource Enhancement Plans and Watershed Restoration Plans. SCC funds the preparation of Wetland Enhancement Plans and Watershed Restoration Plans.	SCC	Various wetland restoration plans in development as part of Southern California Wetlands Recovery Project, SF Bay Joint Venture and Central Coast wetlands assessment.		Complete instream and riparian habitat projects; complete eroding streambanks/shorelines projects; Initiate new hydromodification projects; Program Proposition 40 funds.
Plan 1128	Develop regulations that delegate CWA §401 authority to Regional Boards.	SWRCB	Regulations have been completed		Activity is complete.
Plan 1132	Ensure compliance with CEQA and Porter-Cologne Act when certifying nationwide permits.	SWRCB	This is done on a continuous basis.		Activity is ongoing.
Plan 1130	Develop CEQA guidelines for wetlands and watershed analysis wetlands and watershed analysis (e.g., an appendix to CEQA guidelines).	SWRCB	This activity was not accomplished due to lack of resources and personnel. Other priorities were addressed. Further action is not anticipated.	None	Finalize the draft document.

Section VI
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 1129	Develop a technical assistance program for state and Regional Board Staff for project design that will include guidelines for designing projects to avoid wetlands and riparian areas.	SWRCB	The SWRCB has developed a draft "Low Impact Development: Outreach and CEQA Tool" that identifies impacts of urban development on stream and wetlands and describes land-use and project-specific management measures to minimize potential impacts. The intended users are builders, elected officials, planners, and regulatory staffs. The CEQA Tool will allow efficient comment on CEQA documents.	Progress has been delayed due to budget constraints.	SWRCB will develop a training manual, conduct classroom training for State Board & Regional Board staff, and develop web-based material to support training.
Target 1122	Evaluate and rank watersheds by level of AML impact.	DOC	Evaluation and prioritization completed for 1 watershed (North Fork Yuba).	Lack of funds and staff.	
Target 1126	Coordinate with RWQCBs, DFG, CCC on high priority coastal riparian projects.	SCC	Work Plans for South California WRP; SF Bay Joint Venture include targeted wetland restoration projects.	Project staffing.	Target Proposition 40 funds.
Target 1125	SCC projects located in coastal areas containing sensitive riparian habitats. Target areas where there are related community programs in place.	SCC	Participate with Riparian Joint Venture staff in targeting coastal needs.	Funding and Project Staffing.	Continue to participate with Riparian Joint Venture staff in targeting coastal needs.
Implement 1168	Develop reclamation program per Senate Bill 666.	DOC	None. No funding was provided for this activity.	No funding available.	None.
Implement 1163	Develop guidelines for staff review of hydromodification projects, and develop stream protecton policy implementation guidelines.	RWQCB2	Stream circular developed for staff and regulated community.		Circular will be used and revised in response to comments and in the field groundtruthing.
Implement 1160	Identify BMPs for channel maintenance and issue WDRs for channel maintenance activities.	RWQCB2	BMP identified and BMP for Channel Maintenance Manual was prepared.		
Implement 1164	Work in coordination with RWQCB2 and operational permit committee of BASMAA to develop MMs and a streamline permitting process for flood channel maintenance.	RWQCB2	Santa Clara County permit issued for flood control activities.	Delays in channel maintenance permit due to USFWS and CEQA issues.	Ongoing work with flood control agencies to develop and issue permit.

Section VI
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Implement 1165	Develop flow-based and other standards to address hydromodification resulting from development.	RWQCB2	Permit amendments require hydrograph management plans.		Ongoing work with stormwater permittees to develop management plans.
Implement 1166	Adopt general order for dredging.	RWQCB5	A Draft permit was developed and is undergoing internal review.	Lack of resources for dredging program.	Place the draft permit out for public review and work on CEQA document.
Implement 1167	Require full mitigation for changes in hydrogeochemical functions as a part of all development projects requiring CWA §401 WQ Certification.	RWQCB9	this has been done for most, if not all, such projects.	Limited staff and funding.	Continue ongoing activities.
Implement 1161	Identify BMPs for channel maintenance and issue WDRs for channel maintenance activities.	SWRCB	The RWQCB 2, has been working with BASMAA's Operational Permits Committee (OPC). The OPC has prepared a draft "Channel Maintenance Activities Which Pose Minimal Threat to Water Quality and Beneficial Uses" permit.	Lack of funds and inadequate staffing has prevented active SWRCB participation. Resolution of endangered species issues have delayed development of the permit.	Finalize the draft permit and identify funding source to enable SWRCB active involvement.
Implement 1159	Assist entities engaged in Hydromodification activities by disseminating up-to-date technical information on: Flood MMs which preserve natural riparian values; Construction and long-term maintenance costs of traditional and alternative flood management.	SWRCB	The SWRCB, through the State Board Office of Statewide Initiatives, and the San Francisco RWQCB, have developed a two-day training course for all Regional Boards. "A Practical Classroom Course - Stream and River Protections and Restoration for the Regulatory and Program Manager has been provided to the North Coast and San Francisco RWQCBs.	Lack of funding has prevented travel and partcipation in training sessions.	The training will be offered to the remaining RWQCBs and will be on-going.

SECTION VII
PROGRESS DISCUSSION
WETLANDS, RIPARIAN AREAS, AND VEGETATED TREATMENT SYSTEMS CATEGORY
July 2001 – June 2003

A. INTRODUCTION

Changes in hydrology, substrate, geochemistry, or species composition can impair the ability of wetland or riparian areas to filter out excess sediment and nutrients, and so can result in deteriorated water quality. The following are identified as land use activities that can cause such impairment: drainage of wetlands for cropland or development, overgrazing, hydromodification, highway construction, deposition of dredged material, and excavation for ports and marinas.

The Wetlands, Riparian Areas and Vegetated Treatment Systems Category (Wetlands) and the four MMs were identified to promote the protection and restoration of wetlands and riparian areas, and to guide the use of vegetated treatment systems in control NPS pollution. Wetlands and riparian areas reduce polluted runoff by filtering out runoff-related contaminants such as sediment, nitrogen and phosphorus. Wetlands also help to attenuate flows from higher-than-average storm events, which protects downstream areas from adverse impacts such as channel scour, erosion and temperature and chemical fluctuations.

The activities that the IACC developed since 1998 with respect to the Wetlands Category are tabulated in the Activity Summary Table of this Section. These activities, as they relate to the Wetlands MMs have been scored, in an effort to describe the level of completeness with which each MM was addressed. The scoring included an identification of each activity as being 'Complete', 'Partially Complete', or 'Not Performed'. A summation of these activity scores is provided in Table VIIA, below.

TABLE VIIA
TALLY OF ACTIVITIES ADDRESSING
WETLANDS CATEGORY MANAGEMENT MEASURES

	Completion Status			Total
	Complete	**Partial**	**Not Performed**	
Wetlands Management Measures				
Activities addressing all Categories	56	40	20	**116**
Activities addressing all Wetlands MMs				**0**
A. Protection of Wetlands and Riparian Areas	7	10	3	**20**
B. Restoration of Wetlands and Riparian Areas	1		1	**2**
C. Vegetated Treatment Systems	1			**1**
D. Education/Outreach	3	4	2	**9**
Wetlands Totals:	68	54	26	**148**

In general, it can be said that 68, out of 148 (or approximately 50%) of the listed activities were completed for the NPS Program. Furthermore, about 82% of the listed

activities were either partially or completely accomplished. What these statistics tells us with respect to the completeness of MM implementation, and its affect on beneficial uses and water quality remains undefined. This inability to effectively determine the level of completeness of MM implementation is something that is being addressed through the MM Tracking Project, which is currently taking place in cooperation with USEPA. It is anticipated that future NPS progress reports will be able to address this question in a more meaningful and informative fashion.

B. WETLANDS CATEGORY OBJECTIVES

Beginning in June of 2002, the SWRCB, CCC and other IACC agencies initiated the process of identifying objectives that would not only address future planning efforts, but would also encompass the activities that agencies have been conducting since 1998. The objectives that were developed are intended to be realistic to the limitations of time and resources, yet directed toward the ultimate goal of full Wetlands MM implementation. These objectives are listed below:

a. Identify, require, and/or implement wetland protection management practices to protect wetlands from NPS pollution.

b. Promote and assist in the study of wetland and riparian habitats at the watershed scale, and incorporate their protection into local planning processes.

c. Work with IACC agencies, whose activities affect the health or function of wetland/riparian areas, to develop agency specific wetland/riparian protection policies, and to assist in the exercise of their authority to implement those policies.

d. Develop/modify and enforce wetland restoration standards on all restoration and mitigation projects.

e. Develop and promote a consistent means of evaluating and guiding riparian and wetland projects.

f. Fund wetland/riparian restoration projects on a watershed basis; this means projects in the upper watershed should be funded before projects in the lower watershed as sections lower in a stream channel, inevitably will be one more destabilized by upper watershed/stream channel problems if they are not first corrected. Most often this includes excessive erosion or deposition or loss of stream bank cover.

g. Streamline the permitting process for wetland and riparian protection and restoration projects, including swift measures for invasive species eradication.

h. Evaluate efficacy of vegetated treatment systems (VTSs) for different categories of pollutants. Develop design criteria, standards, and guidelines.

i. Develop public education and outreach materials for distinguishing between habitat wetlands and VTSs, and detailing the regulatory maze and requirements for habitat wetlands and VTSs.

j. Develop educational planning workshops and/or outreach materials for locally elected officials, and landowners, managers, developers and operations whose activities present threats to wetland/riparian areas.

k. Broaden partnership, coordination, and public participation in streambank and wetland monitoring and restoration projects.

l. Protect, enhance, and restore the natural functions of stream channels, floodplains, and riparian corridors in order to protect water quality from nonpoint source pollution.

The activities that are listed in the Activity Summary Table of this Section, and their scores, have also been correlated to the new Wetlands Category Objectives. The summation of these activities and their completion status is provided in Table VIIB below.

TABLE VIIB
TALLY OF ACTIVITIES
ADDRESSING FUTURE
WETLANDS CATEGORY OBJECTIVES

	Completion Status		
	Complete	**Partial**	**Not-Performed**
Wetlands Objectives	**Wetlands Activity Tallies**		
a) Identify, require and/or implement wetland protection management practices to protect wetlands from NPS pollution.	2	1	2
b) Promote and assist the incorporation of wetland and riparian habitats at the watershed scale and incorporate their protection into local planning processes.	3	9	2
c) Work with the IACC agencies, whose activities affect the health or function of wetland/riparian areas, to develop agency specific wetland /riparian protection policies, and to assist in the exercise of their authority to implement those policies.	1	0	1
d) Develop or modify and enforce wetland restoration standards on all restoration and mitigation projects.	1	1	0
e) Develop and promote a consistent means of evaluating and guiding riparian and wetland projects.	1	2	2
f) Fund wetland/riparian restoration projects on a watershed basis.	3	4	1
g) Streamline the permitting process for wetland and riparian protection and restoration projects, including swift measures for invasive species eradication.	0	5	2
h) Evaluate efficacy of vegetated treatment systems (VTS) for different categories of pollutants. Develop design criteria, standards, and guidelines.	1	0	0
i) Develop public education and outreach materials for distinguishing between habitat wetlands and VTSs, and detailing the regulatory maze and requirements for habitat wetlands and VTSs.	0	0	0

TABLE VIIB, cont.

j) Develop educational planning workshops and/or outreach materials for locally elected officials, and landowners, managers, developers and operations whose activities present threats to wetland/riparian areas.	0	3	0
k) Broaden partnership, coordination, and public participation in streambank and wetland monitoring and restoration projects.	2	2	0
Total Wetlands:	**14**	**27**	**10**

C. ISSUES AND CHALLENGES

The implementation of the NPS Wetlands MMs, and resulting protection of water quality in the State, faced many significant challenges. These included issues of pressure to encroach on protected wetlands, the need for greater understanding of VTS options and limitations, severe State budget shortages and differing strategies across various state agencies with authority to effect improvements in water quality.

Similar to MMs in other NPS land use categories, State budget restrictions continue to impact efforts to protect and restore wetlands and riparian areas. The situation is made worse by the fact that wetland/riparian projects often require long-term monitoring. Budget shortages for the regulatory agencies, for example, undercut their ability to follow up, evaluate, and enforce against noncompliant wetland restoration or mitigation projects.

There have been, and continue to be other concerns that affect how the issue of wetlands and riparian areas in this state is handled. Consistent standards have not yet been developed for wetland/riparian restoration and mitigation projects. Despite the wide recognition of the benefits of wetlands to water quality and habitat, the approaches adopted by various agencies for their protection are inconsistent. For example, not all RWQCBs have assigned beneficial uses for wetlands, yet compliance with water quality objectives, in many cases, offers the best available performance measure for wetland/riparian NPS management actions. As a result, wetlands in some regions may not be afforded the same level of protection as in other areas of the State. There thus exists an urgent need to bring consistency to the various agencies' wetland/riparian protection policies and guidelines for vegetated treatment systems.

Another complication has been that vegetated treatment systems (VTSs) have often been confused with habitat wetlands. There are two significant consequences for such uncertainty. First, some might incorrectly assume that a vegetated treatment system designed for storm water treatment, would also satisfy habitat preservation requirements. Secondly, VTSs created strictly for the purpose of storm water treatment might coincidentally encourage habitat for endangered species. This could in turn create the regulatory restrictions that would prevent any maintenance activities necessary for effective treatment.

Problems have arisen because the dual optimal functions of habitat and storm water treatment may generally be incompatible, as indicated in literature. (Sutula, M., and Stein, E. 2003. Habitat Value of Natural and Constructed Wetlands Used to Treat Urban

Runoff: A Literature Review. California State Coastal Conservancy.) Optimizing a constructed wetland' s treatment capacity entails design specifications and/or maintenance activities that may necessarily diminish its ability to support high habitat values such as species diversity. Clear guidelines distinguishing VTSs from habitat wetlands can also go a long way to alleviate the liability concern surrounding endangered/threatened species found in constructed wetlands, and thus help promote the use of more VTSs for storm water treatment.

D. WETLANDS TOPICS FOR DISCUSSION

The three exemplary activities discussed below represent successful implementation of some of the most urgently needed actions regarding wetlands and riparian areas. The results of these efforts have provided information to identify and prioritize wetland projects, to make possible the implementation of consistent monitoring methods for the various wetland resources and pollutants, and have provided funds to support vital wetland acquisition and restoration. These projects are described below:

1. Baylands Ecosystem Species and Community Profiles

The Baylands Ecosystem Species and Community Profiles is an exhaustive compendium of local bayland animal, bird and plant species and ecosystem profiles. This document formed the biological basis for the *Baylands Ecosystem Habitat Goals Report.* Although this document was published prior to 2001, it continues to be publicized and distributed by the RWQCB2 through the San Francisco Estuary Project, and represents over four years of work by more than 100 individuals. This document was intended as a comprehensive reference for baylands habitats and species around the Bay Area, including Suisun marsh.

2. Development of Regional Wetlands Monitoring Protocols

The Wetlands Regional Monitoring Program's (WRMP) (www.wrmp.org) website is managed by staff at the San Francisco Estuary Institute (SFEI). The website maintains ten published wetlands monitoring protocols (for sedimentation, sediment contaminants, tidal marsh vegetation, tidal marsh benthos, red-legged frog, salt marsh harvest mouse, river otter, yuma bat, wetlands birds and invasive cordgrass). These protocols are intended for wetlands monitoring in baylands habitats throughout the Bay Area. Authors include wetlands scientists, technical experts, and agency staff from all over the region. Use of these protocols is not compulsory. Currently, participants in the San Francisco Bay Area Wetlands Restoration Program are working to make these protocols "street-ready" so that those involved in wetlands restoration can apply the protocols in the field.

3. Southern California Wetlands Recovery Project

The Wetlands Recovery Project (WRP) is a partnership of 17 state and federal agencies working in concert with local government, businesses, and the environmental community to implement a regional wetlands recovery strategy for coastal Southern California (stretching from Point Conception to the border with Mexico). The long-term vision of the WRP is to reestablish a mosaic of functioning wetland and riparian systems that

supports a diversity of fish and wildlife species. The Coastal Conservancy serves as staff to the WRP and works with local partners to implement WRP projects.

The WRP funds acquisition, restoration, and enhancement projects in coastal wetlands and coastal watersheds in Southern California. The WRP provides grants to government agencies or 501c(3) non-profit organizations, and prefers to fund projects that have been identified as a priority either in a resource management plan or by a resource management agency. High priorities for the WRP include:

- Acquisition and restoration of tidal wetlands and contiguous transitional and upland habitat.
- Acquisition and restoration of floodplain habitat.
- Acquisition and restoration of riparian areas that contribute significantly to watershed functioning
- Restoration of ecological functions in coastal watersheds (e.g., reconnection of stream corridor to floodplain, stream stabilization, invasive species management, etc.)

There are two ways to get funds from the WRP. Each year, a WRP Work Plan is adopted with a list of candidate acquisition, restoration, and enhancement projects. Once a project is placed on the Work Plan, Coastal Conservancy staff will work with proponents of candidate projects to further develop and refine the project scope and identify additional funding sources. When the project is ready to be implemented, a recommendation will be made to the Coastal Conservancy board to award a grant to the project. Another funding opportunity is with the WRP Small Grants Program for community-based restoration projects in coastal wetlands and watersheds in the region.

To date, the WRP has funded 53 projects on the WRP Work Plan and 20 with the Small Grants Program. A total of 25 projects have been completed. The 53 Work Plan projects may be categorized as follows:

- *Acquisition (11)* – The acquisition opportunities (completed or under negotiation) have clustered around San Elijo Lagoon, Santa Clara River Parkway, Batiquitos Lagoon, Los Cerritos Wetlands, the Santa Monica Mountains, Huntington Beach, and Ormond Beach.
- *Studies and Plans (23)* – Technical studies, feasibility studies, and restoration plans are often necessary to determine the appropriate restoration approach before design and permitting may begin.
- *Design (6)* – The design stage often includes construction drawings, permitting, and bid documents.
- *Restoration Implementation (13)* – Restoration projects (completed or in progress) range from exotic plant eradication to marsh restoration to bank stabilization, fish barrier removal, and floodplain reconnection for creeks.

The Coastal Conservancy awarded almost $41 million in grants to these projects, leveraging an additional $28 million of federal, state, and private funds.

E. NEXT STEPS

The Five-Year Plan for Forestry provides some structure which can be used to address NPS pollution in Wetlands, and considerations for Vegetated Systems. Similarly, the Category Objectives agreed to by the various agencies are well supported by the proposed activities. The emphases of theses activities will be:

- Active implementation of BMPs to protect wetlands.
- Incorporation of wetland and riparian area protection into local planning.
- Promotion of consistent and enforceable standards on all restoration and mitigation projects.
- Outreach and education to local stakeholders.
- Partnership and coordination with State and local entities.

The Coastal Conservancy WRP will also continue to implement projects through the WRP Work Plan and the Small Grants Program. To support project development, implementation, and maintenance, the WRP will undertake the following initiatives:

- Offer Technical Assistance
- Develop New Funding Sources
- Inform Resource Management with Science

Section VII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Wetlands

Management Measure 6A Protection of Wetlands & Riparian Areas

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1212	SCWRP projects involve funding for analysis of habitat resource values, conditions and project feasibility. Provide grants for developing restoration plans and feasibility studies for wetlands projects, including tidal and riparian restorations, streambank stabilization, and dam removal projects. Science Panel evaluating critical issues and constraints related to wetland restoration and providing policy recommendations. Activity also addresseses MM 6B.	SCC	Completed funding of priority wetland restoration and enhancement feasibility analyses using funding from Proposition 12 (2000-2003).	Funding and Project Staffing.	
Assess 1211	SCC funds analyses of wetland and riparian protection, restoration and enhancement projects as part of Wetland Enhancement and Watershed Restoration Plans and River Parkway Plans. Activity also addresses MM 6B.	SCC	Completed funding of priority wetland restoration and enhancement feasibility analyses using funding from Proposition 12 (2000-2003).	Funding and Project Staffing.	
Coordinate 1241	Participate in multi-agency and multi-jurisdictional task groups, such as the Southern California Wetlands Recovery Project (SCWRP), Morro Bay NEP Implementation Committee Lower Owens River Project, etc. Activity also addresses MMs 6B and 6D.	CSLC	There is enhanced coordination in Wetland-related activities. Continued participation in SCWRP, Lake Tahoe Environmental Improvement Program Implementation Assessment Task Force, Tahoe Regional Planning Agency Shorezone Review Committee, and other interagency efforts (details available in document entitled DEPM interagency Coordination & Representation).	Lack of dedicated water quality staff and funding.	Continue active participation whenever feasible.
Coordinate 1234	Participate in regional floodplain planning activities, such as BAWPG. Activity also addresses MM 6B.	RWQCB2	The Bay Area Wetland Planning Group is now the SF Bay Wetland Restoration Group. RB staff are participating in Design and Monitoring Groups affiliated with this project. Discussing Wetland Project design (DRG) and Monitoring Projects (WRMP).	Would be beneficial to participate on South Bay Salt Pond TAC and Montezuma TAC but funds limited for staff participation.	Obtain funds for staff assistance with large restoration projects.

Section VII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 1235	Develop regional plan for baylands habitat. Activity also addresses MM 6B.	RWQCB2	Completed through Baylands Habitat Goals Project.		Ongoing work with Wetlands Restoration Program to implement plan.
Coordinate 1239	SCC projects involve an existing wetland or watershed stakeholder group or the formation of same or public and technical and scientific advisory committees. Activity also addresses MMs 6B, and 6D.	SCC	Participation in statewide Wetlands Managers Coordinating Committee; Continue to coordinate Southern California Wetlands Recovery Project; coordinate with SF Bay Joint Venture.	Project staffing	Complete three dam removal feasibility analyses (2004-2005).
Plan 1221	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also addresses MM 6B, and 6D.	RWQCB2	Drafted Public Notice and MOA between Regional Board and Corporations.	Permit not issued by the Corporations due to legal concerns and State CEQA issues.	
Plan 1222	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also address MM 6B and 6D.	RWQCB3	None, except through permit streamlining efforts in Elkhorn and Morro Bay Watersheds. Permit coordination development process started in Santa Cruz County.	Inadequate resources.	Focus shifted to providing technical assistance for Local Coastal Plan updates to facilitate and improve resource protection.
Plan 1223	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also addresses MMs 6B and 6D.	RWQCB4	Met with partner agencies, developing stream-lined permit applications.	Limited resources, changing requirements.	Formal agreement with corporations.
Plan 1225	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also addresses MMs 6B and 6D.	RWQCB6	No formal agreements have been established	Limited Resources.	Pursue activity when resources allow.

Section VII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 1226	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also addresses MMs 6B and 6D.	RWQCB7	The Citizens Congressional Task Force on the New River is a committee that consist of local, state, and federal agencies. The responsibility of the committee is to manage two pilot constructed wetlands in the Imperial Valley. Regional Board staff are active members of the committee and participated in all its bimonthly or quarterly meetings and activities over the past four years. The process is still on-going and lessons learned from those two pilot projects will definitely help streamline the wetland permitting process.		Continue current activities.
Plan 1228	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources. Activity also addresses MMs 6B and 6D.	RWQCB9	Not done.	Limited staff and funding; State cannot or will not accept funding offered by ACOE for work on SAMPs.	Advocate the State accept ACOE funding for work on SAMPs.
Plan 1232	Fund the preparation of Wetland Enhancement Plans and Watershed Restoration Plans. Also the SCWRP Regional Plan. Activity also supports MM 6B.	SCC	Completed several enhancement and restoration plans for coastal wetlands.	Funding and Project staffing.	Continue to complete wetland enhancement and restoration plans; Initiate new plans; Program Proposition 40 funds.
Plan 1216	Ensure compliance with CEQA and Porter-Cologne Act when certifying nationwide permits.	SWRCB	This is done on a continuous basis.		Activity is ongoing.
Plan 1219	Establish formal agreements between agencies on program-level issues in order to streamline the permitting process and better protect resources, and to provide financial assistance to encourage environmentally friendly floodplain management. Activity also supports MMs 6B and 6D.	SWRCB	A Memorandum of Understanding between the SWRCB and the U.S. Army Corps of Engineers has been drafted. No action has been taken as of yet due to lack of resources. Financial assistance has been provided through §319(h) and other grant programs.	Lack of Resources.	Finalize MOU.

Target 1214	Coordinate with RWQCBs, DFG, CCC on high priority wetland and riparian projects. Activity also addresses MMs 6B and 6D.	SCC	Participate on several wetlands committee meetings focused on targeting and prioritizing wetland enhancement and restoration projects, including statewide Wetlands Managers Coordinating Committee, SF Bay Joint Venture and SC Wetlands Recovery Project.	Funding and Project Staffing.	Continue to implement SF Bay Habitat Goals Report, Restoring the Estuary, and the SC Wetlands Recovery Project Action Plan; Program Proposition 40 funds.
Target 1215	Target funding to high priority areas and projects identified by Manager Group, Science Panel and contained in SCWRP Regional Plan. Activity also addresses MMs 6b and 6D.	SCC	Participate on several wetlands committee meetings on targeting and prioritizing wetland enhancement and restoration projects, including statewide Wetlands Managers Coordinating Committee, SF Bay Joint Venture and SC Wetlands Recovery Project.	Funding and Project Staffing.	Continue to implement SF Bay Habitat Goals Report, Restoring the Estuary, and the SC Wetlands Recovery Project Action Plan; Program Proposition 40 funds.
Implement 1246	Complete Basin Plan Amendment to provide guidelines for determining wetland mitigation compensation and monitoring requirements. Activity also addresses 6B and 6D.	RWQCB2	Basin Plan Amendment prepared and will have new beneficial uses to protect wetlands. Mitigation Guidance is awaiting approval to be put on web page.		Guidelines will be put on Web site; Basin Plan Amendment to be taken to Board in fall 2003.
Implement 1264	For SC Wetlands Recovery Project (WRP) Implement Annual Work Plan developed by Managers Group and approved by Governing Board. SCC projects implement elements of Wetland Enhancement Plans or Watershed Restoration Plans. Activity also addresses MMs 6B.	SCC	Funding for Annual Work Plan projects from Proposition 12 completed (2000-2003).	Project staffing.	Funding for Annual Work Plan projects from Proposition 40 (2003-2005).
Implement 1243	Provide incentives for flood management approaches that minimize the need for channelization and channel hardening. Activity also addresses MMs 6B and 6D.	SWRCB	No action taken due to lack of resources.	Lack of Resources.	

Management Measure 6B Restoration of Wetlands & Riparian Areas

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Implement 1247	Wetlands restoration projects.	RWQCB2	Numerous staff participated in reviewing and commenting on a variety of wetland restoration projects.		Ongoing project reviews.

Implement 1253	Promote implementation of wetlands restoration and wetlands treatment systems. Activity also addresses MMs 6C and 6D.	RWQCB9	Participation in Southern California Wetlands Recovery Project, including project selection.	Limited staff and funding.	Continue and increase participation.

Management Measure 6C Vegetated Treatment Systems

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 1293	Review existing studies on polluted runoff abatement functions of vegetated treatment systems to assess whether BCDC should promote their use.	BCDC	Proposed water quality findings and policies in BCDC's Bay Plan address vegetated treatment systems.		This activity is listed for 04-05 but will likely not be included in the next five-year plan.

Management Measure 6D Education/Outreach

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Plan 1229	Develop CEQA guidelines for wetlands and watershed analysis (e.g., an appendix to CEQA guidelines).	SWRCB	This activity was not accomplished due to lack of resources and personnel. Other priorities were addressed. Further action is not anticipated.		
Plan 1218	Develop a technical assistance program for project design that will include guidelines for designing projects to avoid wetlands and riparian areas.	SWRCB	In Progress. Activity will be continued for next five-year period.		Activity is ongoing.
Plan 1217	Develop regulations that delegate CWA §401 authority to RWQCBs.	SWRCB	Regulations have been completed.		Activity is completed.
Implement 1249	Development of regional wetlands monitoring protocols.	RWQCB2	See numerous protocols for wetland monitoring at San Francisco Estuary Institute's (SFEI) Web Page under WRMP (Wetlands Regional Monitoring Program).		
Implement 1248	Develop regional plan to implement Habitat Goals and develop MOA with agencies regarding permitting and restoration efforts.	RWQCB2	No regional plan has been written to implement Habitat Goals but we work with agencies in San Francisco Bay to do this within the context of the Habitat Goals report.		Staff will continue working to implement habitat goals.

Section VII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Implement 1245	Complete Baylands Ecosystem Species and Community Profiles.	RWQCB2	Follow-up document report completed in 2000.		
Implement 1244	Establish Baylands Advisor position to assist staff with review of projects within or near baylands.	RWQCB2	No action to date.	Awaiting personnel action from State Board.	Anticipate assigning position once specialist has been named.
Track and Monitor 1268	Continue to develop Southern California Wetlands and Watershed Inventory website and WRP Data Library.	SCC	First phase of Digital Coastal Wetlands Inventory funded; initial digitizing completed.	Funding and Project Staffing.	Complete Digital Coastal Wetlands Inventory (2004-2005); Finalize funding for Digital Inventory.
Track and Monitor 1267	SCC requesting funds to development of statewide Coastal Wetland Inventory.	SCC	First phase of Digital Coastal Wetlands Inventory funded; initial digitizing completed.	Funding and Project Staffing.	Complete Digital Coastal Wetlands Inventory (2004-2005); Finalize funding for Digital Inventory.

SECTION VIII
PROGRESS DISCUSSION FOR ACTIVITIES RELEVANT TO ALL OR MULTIPLE LAND USE CATEGORIES
July 2001 through June 2003

A. INTRODUCTION

This section presents the NPS activities that were more broad-based than those identified in the land-use specific sections of this document.. The distinction between activities that are listed in this Section (Section II) and those listed in the land-use specific sections (Sections III-VIII) is that activities in this section relate to changes being made in policy, procedures, administrative actions, or coordination of efforts. These activities will either immediately or ultimately promote improved water quality in a variety of land use categories. For example, an activity that might have created development of a watershed plan would cover the planning aspects for multiple land uses, such as urban, agriculture or perhaps forestry land use categories. One actual example is the Critical Coastal Area program (CCA), which is more completely described later in this section. Essentially, the CCA program, to be successful, must address aspects of all land use activities that occur adjacent to these valuable designated resource areas.

A tabulation and brief summary of the activities that meet these conditions is provided at the end of this Section. The contents of the Activity Summary Table includes the purpose of each activity, responsible agency, accomplishments over the biennial/five-year report period, roadblocks to accomplishing the activity objectives, and a listing of next steps to be taken, if any, to accomplish those objectives.

B. IMPLEMENTATION PLAN OBJECTIVES

Beginning in June of 2002, the SWRCB, CCC and other IACC agencies began the process of identifying objectives for the future five-year implementation period. The intent was that these objectives should not only direct future activities, but should encompass the activities that IACC agencies have been conducting since 1998. The new objectives also were required to facilitate the process of performance evaluation at appropriate stages throughout the implementation process. The objectives that were developed were intended to be realistic to the limitations of time and resources, yet lead toward the ultimate goal of full MM implementation. The final, agreed-upon objectives are as follows:

1. Promote the implementation of MMs and related practices by all levels of water quality managers (federal, State, watershed groups and other stakeholders).
2. Preserve water quality in water bodies that are currently meeting California water quality standards and protect them from future degradation from the impacts of nonpoint source pollution.
3. Promote the implementation of MMs and use of MPs for the NPS component of TMDLs or in 303(d) listed water bodies.
4. Promote better leverage of inter-agency and private entity resources for NPS Programs.

The activities that are tabulated in this section were correlated with the 2003-2008 Five-Year Plan Objectives. This was done in order to determine the quantity and type of the activities have already taken place with respect to the future objectives. The summation of these activities and their

completion status is provided in Table VIII-A, below. Although this type of information has its shortcoming, it nonetheless gives a broad overview as to how well-directed the activities have been towards meeting implementation plan objectives. In this sense, it enables a starting point from which future program activities can be selected and promoted.

TABLE VIIIA
Tally of Activities Addressing
Future Five-Year Plan Objectives

	Completion Status		
	Complete	**Partial**	**Not-Performed**
Overall Five-Year Plan Objectives			
1. Promote the implementation of MMs and related practices by all levels of water quality managers (federal, State, watershed groups, and other stakeholders).	20	11	4
2. Preserve water quality in water bodies that are currently meeting California water quality standards and protect them from future degradation from the impacts of nonpoint source pollution.	8	9	7
3. Promote the implementation of MMs and use of MPs for the NPS component of total maximum daily loads (TMDLs) or in CWA section 303(d) listed water bodies in order to improve water quality.	13	5	1
4. Promote better leverage of inter-agency and private entity resources for NPS Programs.	19	15	7
Total Overall:	**60**	**40**	**19**

The vast majority of the activities that are listed in this Section have involved coordination of multiple parties, incorporation of stakeholder involvement, or other significant forms of collaboration. This fact is reflected in the numbers listed in Table VIII-A for Objectives 1 and 4, both of which emphasize the importance of outreach and utilization of resources from multiple interested parties, including the Interagency Coordinating Committee (IACC) and the San Francisco Bay Plan Amendment Process (SFBPA) participants. The foremost activity that addressed the second objective, 'Preserve water quality in water bodies that are currently meeting California water quality standards and protect them from future degradation from the impacts of nonpoint source pollution" was the Critical Coastal Area (CCA) project. The CCA project had limited support in terms of funding, but nonetheless resulted in acknowledged success due to the high level of interest among the responsible agencies and the stakeholders. The IACC, SFBPA, CCA and other 2001-2003 projects are more completely described below.

C. SIGNIFICANT ACTIVITIES

Examples of some of the NPS activities that occurred during the reporting period that utilized multiple agency coordination and emphasis on both pristine and impaired water bodies follows.

.

1. **The IACC.** Over the past two years, the IACC has continued to grow, both in numbers of actively participating members and in the accomplishments that the members have achieved together. The most significant developments have occurred through subcommittees of the IACC, including the CCA, and land use category subcommittees. The participating agencies worked collaboratively to

develop an understanding of the NPS-related activities that each was involved in, and to use that knowledge in the development of key objectives for each land use category. The IACC also developed a database that incorporated the details of each agency's activities and could be used as a tool to facilitate further collaboration. The database allows for searching and sorting according to different information categories, such as location, activity type, deliverables, and pollutant or stressor of concern. This process culminated in the development of the State's Five-Year Implementation Plan for 2003-2008, and will be further pursued to develop collaborative, multi-agency activities related to NPS.

The IACC has shown itself to be a good example of interagency collaboration. In addition to general IACC committee participation, members have developed focus groups or subcommittees, the most active and productive of which have been the CCA committee, and the land-use category subcommittees for Agriculture, Urban and Marinas. Additionally, IACC members worked collaboratively in the development of five-year plan objectives and the Five-Year Implementation Plan, which will guide the State's course of action for NPS pollution prevention.

2. **The San Francisco Bay Plan Amendment (SFBPA).** The process that was conducted to develop the San Francisco Bay Plan Amendment provided an excellent example of the effectiveness of interagency collaboration to achieve an end result – an approved Bay Plan Amendment which addresses NPS pollution. The agency representatives who were involved in this process included staff from the San Francisco Bay Conservation and Development Commission (BCDC), the California Coastal Commission (CCC), the San Francisco Bay RWQCB (RWQCB2), and the NPS Program Implementation Unit of the SWRCB.

   The amendment process focused on NPS source pollution for two main reasons; a) implementation of California's nonpoint source pollution is a major focus of the State's water quality agencies, and b) the BCDC received federal funds to implement its NPS pollution work program. The new amendment addresses the following:
   - Tidal flats; conservation and restoration of water surface areas and volume to protect and improve water quality;
   - New project siting, design, construction, and maintenance to prevent or minimize discharge of pollutants into the Bay;
   - Coordination with other agencies when considering a project in an area polluted with toxic or hazardous substances and support of other agencies in developing nonpoint source pollution control programs;
   - Siting and design of new developments so as to be consistent with stormwater permits and stormwater management guidelines and with protection of the Bay;
   - Use of native vegetation (bugger?) areas as part of a project.

   Part of the collaborative process regarding the SFBPA included participation in the four public hearings that were held by BCDC. The purpose of the hearings, which were held from October 17, 2002 through June 19, 2003, was to allow stakeholders to develop an understanding of, and to comment on the proposed amendments. The final result was BCDC adoption of Resolution No. 03-01, approving Bay Plan Amendment No. 8-02, This action amended the *San Francisco Bay Plan* by revising the water quality findings and policies.

3. **The Critical Coastal Areas Program (CCA).** The CCA is an innovative program designed to foster collaboration among federal and State government agencies and local stakeholders to better coordinate resources and focus efforts on coastal-zone watershed areas in critical need of protection

from polluted runoff. The multi-agency statewide CCA Committee identified 101 CCAs along the coast and in San Francisco Bay, and completed the *Critical Coastal Areas Draft Strategic Plan* (CCA Strategic Plan) in 2002. The criteria used to identify CCAs reflect the dual goals of improving degraded water quality, and providing extra protection from polluted runoff to marine areas with recognized high resource value.

During the summer of 2003, the CCA Subcommittee held Information Exchange Forums within each of the four regions designated in the CCA Strategic Plan (North Coast, Central Coast, South Coast, and San Francisco Bay). The purpose of the forums was to introduce the CCA Program, invite participation by local agencies, community members and other interested stakeholders, and obtain input on the water quality and land use issues in each CCA watershed.

The CCA Committee is now compiling information obtained at the forums to develop fact sheets for each of the identified CCAs and prepare a *State of the CCAs Report.* Upon completion of the report, the CCA Committee will hold state-wide meetings to share the information and identify potential pilot CCA projects in each of the four regions. Beginning with four pilot CCAs (one in each of the regions), the CCA Subcommittee will form teams of local stakeholders and government agencies to develop community-based CCA Action Plans for addressing polluted runoff that threatens coastal resources within these CCAs. CCA identification may be used to support the acquisition of grant funding by prioritizing protection efforts. It is anticipated that, in spite of the lack of funding, the CCA program will continue through the next five-year period.

4. **State NPS Conference.** In October of 2001, the SWRCB, CCC, RWQCBs, the Watershed Management Council, and the USEPA put together the first biannual NPS Conference, entitled '*Demonstrating Nonpoint Source Solutions*'. The conference focused presentations about successful on-the-ground water quality programs and related watershed projects. The close-out attendance of the conference attracted about 200 professionals, including watershed coordinators, water quality specialists, nonprofit organizations, landowners and others. Included in the program were field trips to successful urban and rural pollution prevention projects. The interest and positive feedback ensured that the NPS Conference forum would be repeated in 2003.

5. **Citizen Monitoring**. The Citizen Monitoring Program is a SWRCB program that provides implementation support to all six of the NPS Program categories. Citizen monitoring water quality specialists,otherwise known as the Clean Water Team (CWT), participate in multiple activities related to providing technical assistance, data management services, citizen training, and outreach/communication. SWRCB staff members working on the CWT were reduced from four members to three in 2002. This has limited their support to citizen groups, which is particularly critical in these times of limited State and local resources. Nonetheless, the CWT continues to broaden the effectiveness of the NPS Program by expanding community awareness of nonpoint source pollution and increasing the skill level throughout nonprofit groups and other interested parties who can assist in monitoring and assessment efforts. In particular, the following occurred throughout the last two years;

   - <u>Technical Assistance and Training</u>. Technical assistance was provided to citizen groups and technical advisory committees by developing how-to materials, conducting workshops and field training, on-site field reviews, monitoring equipment training, reviewing and amending monitoring plans, and by providing frequent consultation by phone or email.. Technical support was also provided for the World Water Monitoring Day event, National Secchi Dip-In, Statewide Coastal Snapshot Event, and several local snapshot events. Of special notice was the

annual Russian River First Flush Monitoring event and full day training workshops on biosurvey/bioassessment. Multiply half-day workshops were given on water quality monitoring methods and Data Quality Management.

- Data Management. CWT provides support for data quality management with data files and instructions to citizens, and by discussing data capture and compatibility needs with the other water quality database managers and analytical service providers. The intent is to be able to include Citizen Monitoring data as part of the Statewide SWAMP database, a database to be used for information regarding water quality status and trends and decisions based on this information. The Citizen Monitoring element of the Statewide SWAMP database is still under development.

- Outreach/Communication. Promotion of citizen monitoring program information occurred where possible. Brochures and e-mails with program information and web site address were distributed to all that inquired. More than one hundred separate informational e-mails were sent to the CWT contact list, and the CWT web page is continually updated with new information and resources. Program materials were presented to newly formed groups in the foothills and valley regions, and Citizen Monitoring program information was also presented at the roundtables of the SWRCB' s TMDL, SWAMP, and NPS programs. Tremendous outreach was achieved through a poster presentation (The Power of Citizen Monitoring) at the 2003 NPS Conference in Ventura. The CWT poster was also displayed at SWRCB headquarters, Region 4 and Region 8. In addition, the CWT produced the fifth issue of the electronic newsletter CURRENTS which is posted on the web at http://www.swrcb.ca.gov/nps/docs/newsletter

D. ACTIVITIES TABLE

The Activity Summary Table for activities in the "All or Multiple" land use category is provided below. The Table also provides brief descriptions regarding the status of the activities as well as future actions to be taken, where applicable.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

All_or_Multiple

Management Measure All All

Process Element	Activity Purpose	Agency	Accomplishments	Roadblocks	Next Steps
Assess 241	Review the effectiveness of existing MMs in CCAs.	CCC	This will be one of the primary tasks for the regional CCA committees. In developing an action plan for each pilot CCA, they will assess the MMs that have been implemented for those pilot projects. There are insufficient resources to evaluate the implementation and effectiveness of MMs in each of the 102 identified CCAs at this time.	Funding for plan development and implementation has not yet been identified and agency staff participation in the state or regional committees has yet to be guaranteed.	Support the evaluation of MM implementation and effectiveness for pilot projects identified through a public meeting process during the summer of 2003.
Assess 247	Train staff on NPS management measures/practices, conducting site visits and reviewing/preparing lease/permit applications and environmental documents for potential projects on State lands.	CSLC	Develop grant proposal to determine if and to what degree CSLC lands contribute to water quality impairments; Train staff; Develop site review checklists pursuant to grant; Initiate development of Water Quality Program Intranet site. CSLC, in partnership with DPR, was awarded State Lands assessment grant. In 2002, two intra-agency trainings were held to educate CSLC staff on the grant, State NPS Program, and TMDLs. In 2002, a water quality program site was added to the CSLC Intranet; the site is designed with a goal of helping staff to review water quality issues in lease applications and environmental documents.	NPS-related activities are conducted by existing staff with multiple core agency responsibilities, not dedicated Water Quality staff; one or more BCP(s) would be welcome.	Complete grant tasks (by March 2004), circulate grant products, and schedule additional trainings. Continue ongoing staff review and inspection of new commercial lease applications and lease renewals to ensure spill prevention plans and BMPs are in place or are proposed for implementation. Continue to update water quality Intranet site.
Assess 244	Drinking water source assessment and protection.	DHS	Completed assessments for 12,411 sources as of April 4, 2003 (80%). 100% completion expected by December 31, 2003.	Resource limitations (referring to DHS limitations to follow up on possible causes of non-point source pollution identified during water system evaluations).	Continue assessments for new sources; share data with other agencies; promote protection of drinking water supplies.
Assess 233	Review the effectiveness of existing MMs in CCAs.	RWQCB2	CCAs identified and schedule being developed.	Delays in setting up CCA and strategy.	RWQCB 2 will continue participating in CCA project development.
Assess 234	Review the effectiveness of existing MMs in CCAs.	RWQCB3	This was not addressed during 1998-2003 period, but will be in future months.	Inadequate resources.	To be implemented according to CCA Plan.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Assess 240	Review the effectiveness of existing MMs in CCAs.	RWQCB9	Not done.	Limited staff and funding.	None.
Assess 231	Prepare the CWA §303(d) and TMDL priority list.	SWRCB	The SWRCB initiated review of the 1998 section §303(d) and TMDL priority list in March 2001. Follow-up comment period and other activities ensued, and the SWRCB approved the 2002 §303(d) list on February 2003 and submitted the revised list to US EPA on 2-28-03.		Continue with ongoing activity.
Coordinate 1273	Review and possibly update BCDC's special permit conditions.	BCDC	Staff worked with San Francisco Bay RWQCB staff to evaluate the Commission's current permit special conditions regarding water quality and is in the process of updating them to reflect present scientific understandings of polluted runoff and state-of-the-art BMPs. Suggested permit conditions and revisions are undergoing internal review.		Staff will continue to update these conditions.
Coordinate 1300	Develop a process for BCDC's enforcement staff to coordinate and collaborate with the Regional Board's enforcement staff on enforcement cases involving polluted runoff.	BCDC	There has not been any progress on this activity primarily due to the extended process for the proposed water quality Bay Plan amendment.		This activity is listed for 02-03 and 03-04 and may be included in the next five-year plan.
Coordinate 1288	Revise BCDC's MOU with the Regional Board and State Board.	BCDC	Staff has worked closely with the State and Regional Board staff to assure development of similar or compatible policies. For example, the Regional and State Board staff participate on the Marinas and Recreational Boating Nonpoint Source Task Force and workshops that BCDC hosts and BCDC staff participate on the Interagency Coordinating Committee and subcommittees that the State Board hosts.	In regards to the NPS MOU attachment for marinas, since the Marina monitoring study is a 2-year project, it is important to wait until the end of the study to determine roles of the participating agencies with regard to marinas; likewise, the water quality Bay Plan Amendment process needs to be complete before the NPS language can be updated; further, management needs to agree to any updates.	Staff will continue to work with these agencies to update the nonpoint source attachments to the MOU.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Coordinate 1395	Assist in the identification of potential formal agreements between the CSLC, SWRCB, CCC and/or other parnters to ensure successful implementation of the Program Plan.	CSLC	Development of grant proposal with DPR to assess State lands to determine if and to what degree these lands contribute to water quality impairments. In 2002, the CSLC entered into interagency agreements with the SWRCB and DPR to conduct NPS assessments of State Lands. In 2003, the CSLC, the Department of Conservation, and Abandoned Mines Land Unit entered into an interagency agreement to close abandoned mines thus laying the foundation for future agreements in abandoned mine remediation.	None.	Continue to identify opportunities to partner with other agencies.
Coordinate 1404	Participate in oversight and guidance of efforts to find, eradicate, and prevent infestations of Caulperpa taxifolia.	RWQCB9	As part of SCCAT, helped develop, refine, and implement a strategy to find, eradicate, and prevent infestations of Ct (recent surveys have found no Ct at the two knowwn infestation sites; more surveys will need to be conducted in order to conclude that eradication efforts have been successful, however; also, surveys of other "high risk" coastal waters are needed to determine if there are infestations elsewhere).	Limited staff and funding.	Continue ongoing activities.
Coordinate 1403	Obtain and manage funding to fund, eradicate, and prevent infestations of Caulperpa taxifolia.	RWQCB9	Evaluated funding needs; prepared and submitted requests for funding and encouraged other to do the same; assisted others in preparation of requests for funding; advocated funding for work on Ct; assisted in development of requests for proposals, scopes of work, and contracts; tracked status of funding; reviewed invoices.	Limited staff and funding.	Continue ongoing activities.
Coordinate 1402	Participate in the Southern California Caulerpa Action Team (SCCAT) (formed to find, eradicate, and prevent infestations of the invasive non-native marine alga Caulperpa taxifolia (Ct))	RWQCB9	Attended, prepared agendas for, chaired, and prepared minutes for SCCAT meetings (24 meeting from when Ct was first found in a San Diego region lagoon in June 2000 through June 2003); served on SCCAT Steering Committee and Outreach Committee.	Limited staff and funding.	Continue ongoing activities.
Coordinate 293	Create CCA work groups to identify available resources and future needs.	SWRCB	This activity was conducted and completed in coordination with the California Coastal Commission, the lead agency for this project.		Continue with CCA activities

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 1279	Review San Francisco Bay Plan Water Quality findings and policies pertaining to polluted runoff and prepare planning policy report.	BCDC	Staff completed a planning policy report with proposed revisions to the San Francisco Bay Plan water quality findings and policies pertaining to nonpoint source pollution, entitled Water Quality Protection and NPS Control in San Francisco Bay, dated September 2002 and revised May 2003; held Commission public hearings in October and November 2002, and June 2003.	The public process was extended because many people expressed interest in participating, requested BCDC hold workshops and also requested the comment period to be extended, for example.	Staff held a public hearing in June, 2003 and the Commission adopted these policies in June 2003. OAL approval pending.
Plan 1284	Hold public NPS workshops for interested parties in San Francisco Bay.	BCDC	Staff held four workshops from December 2002 through March 2003 on the proposed water quality Bay Plan Amendment; holds quarterly SF Bay Marinas and Recreational Boating NPS Task Force meetings.		Staff will continue to hold Marina NPS Task Force meetings.
Plan 1304	Train BCDC regulatory and planning staff on any new revised NPS permit conditions, policies, MMs and guidelines.	BCDC	On March 5, 2002, the Regional Board staff held a training for BCDC regulatory staff (permits and enforcement) on construction and erosion control site planning and management for water quality protection, which covered effective BMP for sediment and erosion control.		Staff will continue to train BCDC regulatory and planning staff on any new or revised NPS permit conditions, policies, MMs and guidelines.
Plan 1308	Consider conducting joint training of local governments on polluted runoff control MMs.	BCDC	During the public hearings and workshops for the proposed water quality Bay Plan Amendment, staff received comments that working with or educating local governments is not an appropriate role.	During the public hearings and workshops for the proposed water quality Bay Plan Amendment, staff received comments that working with or educating local governments is not an appropriate role.	This activity is listed for 02-03 and 03-04 but will not be included in the next five-year plan.
Plan 1394	Hold public nonpoint source workshops for interested parties in San Francisco Bay.	BCDC	Staff held four workshops from December 2002 through March 2003 on the proposed water quality Bay Plan Amendment; holds quarterly SF Bay Marinas and recreational Boating NPS Task Force meetings.		Staff will continue to hold Marina NPS Task Force meetings.

Plan 285	Update the in-house Procedural Guidance Manual (PGM) to provide guidance to staff analysts in permit reviews.	CCC	The third edition of CCC' s Procedural Guidance Manual (PGM) was completed in 2000. This latest edition includes fact sheets based on common land uses. These fact sheets contain recommended MMs and BMPs. A “how-to” guide was also created to illustrate the appropriate application of the recommended 85th percentile structural BMP design standard. In addition, a flow chart was developed to guide analysts through the use of this PGM. Lastly, a resource list was provided containing current available NPS resources, including those on the Internet. The PGM is available to CCC' s analysts on the Commission' s Intranet. All the fact sheets, reference list, and flow chart are interconnected electronically for easy maneuvering.	None.	The CCC water quality staff will continue to provide guidance to CCC staff through periodic fact sheets (such as the Water Quality Lessons O’ the Month) that reflect the most current understanding of NPS issues.
Plan 303	Create CCA work groups to identify available resources and future needs.	CCC	A statewide CCA committee has been in existence since 2000. Regional committees are being established during the Spring and Summer of 2003 to address the issues concerning specific CCAs.	Lack of resources may make it difficult for agency representatives to participate in several subcommittees.	Statewide committee will establish regional committees and will establish issue-specific subcommittees as necessary.
Plan 305	Finalize an MOU designed to enhance coordination between SWRCB and CCC.	CCC	An MOU, was signed on February 2nd, 2000, between the SWRCB and CCC to promote the continued close collaboration between the two lead agencies.		Continue collaboration in implementing the State' s NPS Program.
Plan 312	Convene CCAs Committee.	CCC	The CCC has been successful in establishing a state CCA Committee, charged with redefining a list of CCAs and establishing a framework from which this identification would lead to water quality improvements. The committee has identified a list of 102 CCAs along the coast and within San Francisco Bay and established a set of regional subcommittees tasked with creating watershed action plans for a set of priority CCAs by 2005.	Funding for plan development and implementation has not yet been identified and agency staff participation in the State or regional committees has yet to be guaranteed.	Continue to hold statewide committee meetings on a quarterly basis. Coordinate meetings for regional CCA committees. Support the completion of CCA action plans by providing model plans. Support implementation of completed action plans.

Plan 311	Update existing MOU' s/MAA' s and develop new MOU' s/MAA' s with othe agencies as needed.	CCC	(1) A signed MOU, dated February Second, 2000, between the SWRCB and CCC to promote the continued close collaboration between the two lead agencies; (2) a signed memorandum, dated February Second, 2000, from the Secretaries of Cal/EPA and Cal/RA directing all departments and boards within their agencies to use their respective authorities to implement the NPS Program and (3) a signed memorandum, dated February Second, 2000, from the Secretaries requesting Caltrans, Department of Food and Agriculture, and DHS to use their respective authorities to implement the NPS Program; (4) similar memorandums from the Secretaries in March 2003 to encourage continuing agency participation in the program and support in developing the second five-year implementation plans. Other actions, other than establishing formal agency agreements, have been taken to strengthen agency cooperation in implementing the NPS Program. These actions include, but are not limited to: bringing agencies together in the IACC forum and holding summit meetings for agency heads (e.g. SWRCB).	Agencies are reluctant to enter into formal agreements due to the lack of concrete financial support in implementing the NPS Program.	No further efforts to develop MOUs or MAAs at this time. CCC will continue to explore the opportunities for formal agreements and promote agency coordination through other means.
Plan 275	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	CCC	Annual 319 workplans were prepared and submitted to the USEPA via SWRCB from 1998-2003.	There is a need for better coordination with the SWRCB in preparing the workplans in a timely manner.	Annual workplans wil continue to be prepared from 2003 through 2008.

Plan 309	Initiate development of five-year implementation plans for the Cal/EPA, Cal/RA, and other agencies.	CCC	The IACC agencies initiated development of their first five year plans in 2000 and completed them in 2002. The agencies have just completed the second cycle of plan development. A much improved database was put in place by SWRCB to facilitate the plan development and retrieval processes.	Difficulties were encountered during the first development cycle. There were significant problems associated with the computer program used to store the 5-year plan activity data and retrieval could only be done with great inefficiency. In addition the five-year implementation plans developed were not available to IACC members electronically, making identification of partnership opportunities extremely difficult. During development of the second five-year plans, an MS Access™-based database was provided by SWRCB to members. Detailed instructions and glossary of terms were also provided.	Upon completion of the second five-year plan development process, the CCC and SWRCB staffs need to assess the general acceptance and user-friendliness of this program and evaluate any improvements in agency program coordination as a direct result of the database.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 307	Convene Interagency Coordinating Committee (IACC).	CCC	The first IACC meeting was convened in June 2000. During the initial period, the IACC mainly focused on helping the agencies to develop their five-year implementation plans. It then transitioned into a forum to provide focused topical discussions to facilitate implementation of the developed five-year implementation plans. The main task again during the second half of 2002 and early part of 2003 has been assisting the agencies in developing their second five-year plans. The IACC has played an important role in uncovering potential partnership opportunities amongst the different agencies and in promoting exchange of technical and program expertise. In an attempt to facilitate agency cooperation and coordination, the Commission staff, along with that of the SWRCB, convened summit meetings with leaders of the IACC member agencies to ensure that the IACC representatives had all the managerial and financial support needed to continue their participation. Currently, IACC plays more of a supportive role to the various land-use subcommittees. It has become a forum for discussing logistical and overall programmatic issues. This new role for the IACC may continue in the foreseeable future.	Many of the agencies responsible for implementing the NPS Plan do not have resources and funding dedicated to this effort. Attempts to develop a multi-agency Budget Change Proposal have been postponed due to the current state budget situation.	Regular IACC and subcommittee meetings. Develop a feasible and effective means of tracking agencies' NPS implementation. Showcase some success stories.
Plan 287	Develop North Coast Watershed Assessment Plan.	CDF	A plan for performing was completed, and pilot assessments were completed on the Gualala, Matole and Redwood Creek watersheds.	North Coast Watershed Assessment Plan was not funded beyond the 2002-2003 Fiscal Year.	No additional work in absence of funding.
Plan 292	Identify in the CSLC' s Land Information Systems (LIS) Project "Business Case" (currently being developed) the need to establish a database to record water quality information for CSLC leases/permits and to track and monitor CSLC implementation actions.	CSLC	Assignment of CSLC staff with water quality expertise to assist in development and review of CSLC' s Land Information Systems (LIS) Project Business Case. CSLC' s Land Information Systems (LIS) Project "Business Case" identifies need to establish a database to record water quality information for CSLC leases/permits and to track and monitor CSLC implementation actions.	None.	Follow-up.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 291	Develop Watershed-based GIS maps that show State lands and associated land uses (e.g. marinas, grazing leases, Forestry Management Agreements). Make maps available for other agencies and the public.	CSLC	Developing grant proposal to assess CSLC lands to determine if and to what degree these lands contribute to water quality impairments. In September 2002, the CSLC, in partnership with DPR, was awarded a grant that includes the following task: develop Watershed-based GIS maps that show State lands and associated land uses.	Major work on task didn' t begin until after grant received (September 2002). No current roadblocks.	Finalize maps. Use maps in determining priority lands for site visits. Provide maps to other agencies and public as applicable.
Plan 314	Designate a lead staff person to be responsible for coordinating with the SWRCB, CCC and other partners on NPS issues.	DHS	Department assigned Steve Book and Leah Walker to coordinate on NPS issues.	Limited staff time.	Activity completed.
Plan 289	Develop North Coast Watershed Assessment Program plan.	DOC	First set of maps originally due December 2001 were completed December 2002. Funding to be determined and will depend on size of area.	Project funds were cut in FY 2001/02 by $350,000. This resulted in limitations in scope of work; i.e. Reduction of field visits, loss of 2.0 PY, reduced number of aerial photos analyzed. Funding terminated as of July 1, 2003.	Program funds were eliminated as of June 30, 2003. California Geological Survey will continue work on a limited basis as funds allow.
Plan 290	Develop North Coast Watershed Assessment Program plan.	RWQCB1	Developed North Coast Watershed Assessment Program for Gualala. Four other plans underway. Funding for participating agencies cut. Gualala Plan completed.	Resource cuts with partner agencies will slow our progress, but our activities will continue as funding allows.	Continue ongoing activities.
Plan 276	Develop TMDLs pursuant to established schedules.	RWQCB1	Garcia River TMDL implementation plan adopted. Implementation underway.		Resources will dictate our rate of progress in developing TMDLs and implementation plans.
Plan 259	Identify and implement applicable MMs to protect or restore water quality in coastal and ocean waters adjacent to CCAs.	RWQCB1	CCA workshops are in planning stages at this time.	Resources will dictate our level of participation, rate of progress, etc.	Continue CCA planning activities.

Plan 266	Prepare joint annual workplans for NPS Program activities to include information on the use of funding sources (including bond funds).	RWQCB1	NPS workplans are prepared annually, and are submitted to USEPA via SWRCB.		Workplans will continue to be done throughout 03-08 period.
Plan 295	Create CCA work groups to identify available resources and future needs.	RWQCB2	Workgroups established.		Ongoing activities 03-08.
Plan 260	Identify and implement applicable MMs to protect or restore water quality in coastal and ocean waters adjacent to CCAs.	RWQCB2	Strategy developed to address CCAs.	Some delays in identifying CCA strategy.	CCAs identified, upcoming workshops to identify pilot project areas and MM implementation activities.
Plan 277	Develop TMDLs pursuant to established schedules.	RWQCB2	TMDLs being developed and implemented according to schedules.		Ongoing TMDL and implementation in listed waterbodies.
Plan 267	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB2	Annual workplans completed, and are submitted to USEPA via the SWRCB.		Workplans will continue to be done throughout 03-08 period.
Plan 296	Create CCA work groups to identify available resources and future needs.	RWQCB3	Region 3 is participating with state-wide efforts of CCA Committee. Work groups created, resources and needs identified in 5-year Implementation plan update.	None	Project completed.
Plan 261	Identify and implement applicable MMs to protect or restore water quality in coastal and ocean waters adjacent to CCAs.	RWQCB3	Draft CCA Strategic Plan developed.	None	Ongoing implementation of CCA Plan.
Plan 268	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB3	NPS workplans were developed.	None	Annual workplan development.
Plan 279	Develop TMDLs pursuant to established schedules.	RWQCB4	TMDL schedules currently being managed by the TMDL units.	Limited resources	Continue ongoing activities.
Plan 297	Create CCA work groups to identify available resources and future needs.	RWQCB4	Participate in CCA committee.	Limited resources	Formal CCA adoption.

Plan 269	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB4	Workplans conducted annually regarding potential funding sources, and are submitted to USEPA via SWRCB.		Continue annual workplan development.
Plan 262	Identify and implement applicable MMs to protect or restore water quality in coastal and ocean waters adjacent to CCAs.	RWQCB4	RWQCB 4 staff has participated in CCA meetings.	Other Regional Board priorities and resources.	Formal CCA adoption, set up info sessions.
Plan 271	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB6	Annual workplans are developed for federal NPS funding.		Continue ongoing activities.
Plan 281	Develop TMDLs pursuant to established schedules.	RWQCB6	Two TMDLs were adopted by the Lahontan Regional Board.		Continue ongoing activities.
Plan 272	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB7	TMDL development and implementation for surface waters and septic tank replacement for groundwater are the highest priorities in Region 7. All grants from Prop 13 and §319(h) NPS Programs are directed towards achieving these two priorities.		Continue current activities.
Plan 282	Develop TMDLs pursuant to established schedules.	RWQCB7	Through March 31, 2003, the USEPA approved three TMDLs for Region 7. Two of the three approved TMDLs include lists of BMPs for irrigation water management.		Continue TMDL development.
Plan 274	Prepare joint annual workplans for NPS Program activities to include information on use of funding sources (including bond funds).	RWQCB9	Done.	Limited staff and funding.	Continue with workplans.
Plan 302	Create CCA work groups to identify available resources and future needs.	RWQCB9	Not done.	Limited staff and funding.	None.

Plan 264	Identify and implement applicable MMs to protect or restore water quality in coastal and ocean waters adjacent to CCAs.	RWQCB9	NPDES permits (including storm water permits) and non-NPDES WDRs require dischargers to take actions to protect water quality and beneficial uses in coastal (and other) waters; RWQCB9 reissued NPDES permits, updated WDRs, reviewed monitoring reports, and conducted inspections.	Limited staff and funding.	Continue ongoing activities.
Plan 284	Develop TMDLs pursuant to established schedules.	RWQCB9	Nine TMDLs for San Diego region waters are under development; OAL approval is pending for a tenth.	Development of TMDLs is a time consuming, resource intensive, bureaucratic process. There are also stakeholder issues.	Continue TMDL development; Implement TMDLs upon completion.
Plan 308	Initiate development of five-year implementation plans for the Cal/EPA, Cal/RA, and other agencies.	SWRCB	This activity was conducted successfully, and included the development of an ACCESS database to accommodate the managing of information from the multiple agencies involved in California' s NPS program plan.	There were some set-backs in the development of this plan with respect to database management. However, the resource limitations were addressed and managed in-house at the SWRCB, and timely completion of the final plan is anticipated.	Draft Plan to be submitted by July 15, 2003, and final plan by December 31, 2003.
Plan 310	Update existing MOU' s/MAA' s and develop new MOU' s/MAA' s with othe agencies as needed.	SWRCB	A revised MOU was developed between SFBCDC and the SWRCB in 1988. A contract agreement is made annually with the CCC and SWRCB. An MOU between the CDF, the RWQCBs and SWRCB was completed in Spring 2003.		Continue with ongoing activities.
Plan 306	Convene Interagency Coordinating Committee (IACC).	SWRCB	The IACC has established regular meeting schedules and has proven to be a cohesive interactive group dedicated to cooperative efforts at NPS pollution prevention.	Resources are a problem for the IACC, in that little or no additional funding is provided to allow most of the agencies to activity participate in IACC.	Ongoing

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Plan 257	Complete development of database that will enable State agencies to geographically track implementation of MMs and MPs.	SWRCB	A contract is being developed with USEPA and Tetratech to develop a strategy for this level of tracking, and to ultimately establish a tracking database.	Funding restrictions have set back the project, which will need to continue through the next several months.	Project is ongoing.
Plan 304	Finalize an MOU designed to enhance coordination between SWRCB and CCC.	SWRCB	The SWRCB annually prepares a contract with the CCC which stipulates the way in which the two agencies will coordinate their NPS program implementation activities, as delineated in the MOU.	Contractual roadblocks are typically encountered in the length of time it takes to process a contract - both within the SWRCB process, and with funding from USEPA.	Ongoing
Plan 316	Assist in identification of potential formal agreements between the CSLC, SWRCB, CCC, and/or other partners to ensure successful implementation of the NPS Program Plan.	SWRCB	Agreements between CSLC, DPR and CCC were not only identified, but have been carried forth in the following manner: 319 contract has been developed annually with CCC and a state general fund contract has been signed with CSLC and DPR.	The limitations of these agreements, which are contractual in nature, are the limits of funding.	Ongoing
Plan 256	Staff will propose amendments for addition of SWRCB NPS narrative requirements into the California Ocean Plan.	SWRCB	Amendments specific to Areas of Biological Significance (ASBS) were prepared and will be made available for public comment and presented to the SWRCB for approval.		Continue with Ongoing Activities.
Target 252	Target/schedule assessment in watersheds with §303(d) -listed waters, scheduled TMDLs, and/or ESA-listed anadromous salmonids.	CDF	FPR 916.12 adopted.	FPR 916.12 sunsets on 12-31-03.	
Target 255	Initiate process to review and update the CSLC' s standard lease/permit application in part to facilitate review and identification of potential water quality impacts.	CSLC	The assignment of CSLC staff with water quality expertise to assist in revision to CSLC' s standard lease/permit application. A final draft revised application that, among other proposed changes will facilitate the review and identification of potential water quality impacts, has been sent to CSLC Senior Staff for review.	None at this time.	Finalize revisions.

Implement 1113	Collect data from drinking water sampling and analyses.	DHS	Routine on-going work.	Resource limitations (referring to DHS limitations to follow up on possible causes of NPS pollution identified during water system evaluations).	Continue current activities.
Implement 1114	Regulate public drinking water systems.	DHS	Routine on-going work.	Resource limitations (referring to DHS limitations to follow up on possible causes of non-point source pollution identified during water system evaluations).	Continue current activities.
Implement 327	Train community members in bioassessment procedures and sedimentation issues.	RWQCB2	Work with Friends of the Estuary and RWQCB staff to train community members.		Continue ongoing activities.
Implement 334	Establish regional watershed assessment and monitoring resource centers. Provide technical support, information, and training to NPS practitioners, landowners, and community groups.	RWQCB2	East Bay Watershed Center set up at Merritt College.	Funding constraints from RWQCB grant; however Calfed grant received by center.	RWQCB staff will continue to work with watershed center; Calfed grant will provide capacity building.
Implement 330	Train community members in bioassessment procedures and sedimentation issues.	RWQCB6	Staff participated in training community members to conduct citizen monitoring for Water Quality Snapsnot Day in Tahoe-Truckee watersheds.		Continue ongoing activities.
Implement 333	Train community members in bioassessment procedures and sedimentation issues.	RWQCB9	A RWQCB9 staff member asisted in bioassessment procedures training.	Limited staff and funding (SDRWQCB staffer did some of this work on his own time).	None.
Implement 322	Establish a Technical Advisory Council to review and recommend monitoring protocols and quality assurance measures.	SWRCB	The Surface Water Ambient Water Monitoring Program (SWAMP) formed a scientific Planning and Review Committee (SPARC) which met May 21 and 22, 2002. The SPARC submitted a report to SWAMP with recommendations.		Ongoing

Implement 319	Develop generic quality assurance project plans (QAPPs) for monitoring methods.	SWRCB	A model QAPP was developed for the Citizen Monitoring Program to guide environmental sampling efforts. In addition, SWAMP developed a Quality Management Plan.		Promote the use of QAPPs throughout the State.
Implement 321	Prepare California MM guidance.	SWRCB	USEPA is providing linked services (through 319 funds) to help develop NPS guidance specific to California. The goal is to provide a central resource for technical information regarding NPS MPs in California. It supports the NPS Plan's goal of implementing the 61 NPS MMs by 2013, and will also support the implementation of NPS TMDLS.		An on-line NPS database will be developed that provides a quick reference guide to available MP technologies, the effectiveness of techniques in terms of pollutant removal, and the range of expected installation and maintenance costs. In addition, Special Topics Papers will be developed on new and emerging technologies.
Implement 323	Train landowners, community groups, and Resource staff in appropriate watershed monitoring methods.	SWRCB	Quality assurance plans, quality assurance training, data collection, data management, and development of a Technical Advisory Committee (through a 319 contract with the California Association of Resource Conservation Districts) took place.		Continue ongoing activities.
Implement 324	Develop and disseminate revised monitoring protocols for community-based monitoring methods. Focus on methods that track implementation or effectiveness of MMs.	SWRCB	Completed Version 1 of the Clean Water Quality Team Monitoring Compendium. Conducted Training Workshops and disseminated information.	Budget and Staff Reductions have led to downsizing of the Citizen Monitoring Program.	Continue with ongoing efforts.
Implement 320	Develop enforcement guidance to establish process by which the SWRCB and RWQCBs will enforce their authorities as outlined in the NPS Program Plan (CWC §13369).	SWRCB	The draft enforcement guidance has been developed by the NPS Program Implementation Unit of the SWRCB, and is entitled the NPS Implementation Policy.	Many roadblocks have occurred, mostly through legal approvals. It is anticipated that final publication of guidance policy will occur during the final months of 2003.	Ongoing
Implement 318	Provide a California bioassessment lab to serve as a source of reference information for bioassessments, including Internet and web site.	SWRCB	A contract was established with the State Department of Fish and Game to utilize the Aquatic Bioassessment Laboratory in Folsom.		Ongoing

Track and Monitor 1296	Track and monitor the implementation of MMs through the existing enforcement program.	BCDC	The extension of the water quality Bay Plan Amendment process has precluded implementation of this task.	The extension of the water quality Bay Plan Amendment process has precluded implementation of this task.	This task may be implemented after the water quality Bay Plan Amendment and after staff is trained on the appropriate MPs in FY 03-04.
Track and Monitor 382	Provide summaries of water quality and land use information for each identified CCAs.	CCC	A list of 101 CCAs was identified in 2002 . These CCAs were identified based on water quality and land use information based on other public processes. No site specific information has been obtained for these CCAs to date.	The needed information will be identified in the action plans. Not all CCAs will have an action plan developed immediately. Only select sites chosen by the regional committees will have pilot projects developed. There simply isn' t the resource necessary to deal with all the CCAs at once.	Begin convening the regional committee meetings. Identify pilot projects for action plan development. Development of action plans will require the collection of site specific data for the four pilot projects.
Track and Monitor 383	Document site-visits to facilitate any needed follow-up action (e.g. implementation of MPs by a lessor/contractor).	CSLC	Development of grant proposal to assess CSLC lands to determine if and to what degree these lands contribute to water quality impairments. In September 2002, the CSLC in partnership with DPR, was awarded a grant that includes the following task: document site-visits to facilitate any needed follow-up action (e.g. implementation of MPs by a lessor/contractor).	Major work on task didn' t begin until after grant was received in September 2002. No current roadblocks.	Pursuant to grant, complete site visits with the goal of identifying onsite MMs/MPs and/or need/feasibility of adding NPS MMs/BMPs, then develop Action Plan to address runoff from CSLC Lands. Review of OSPR marina site visits will be incorporated into this effort.
Track and Monitor 371	Monitor pathogens in shellfish areas and upland watersheds to determine sources of contamination.	DHS	Pathogens are monitored monthly. Sanitary surveys for watersheds have been completed and are updated annually.	None	Continue monitoring and sanitary survey updates.
Track and Monitor 376	Provide summaries of water quality and land use information for each identified CCA.	RWQCB1	Summaries will be provided as the CCA process progresses.	None.	Summary will develop as the CCA process progresses.
Track and Monitor 362	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB1	This is a RWQCB wish list activity. In addition, we have requested for specific timber-related prescriptions or activities. However, we are not aware of any MM effectiveness monitoring programs underway at this time.	Limited by resources.	Continue activity if resources become available.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Track and Monitor 348	Pilot monitoring strategy in nine key watersheds statewide.	RWQCB2	SWAMP monitoring done in pilot watersheds.	Cancellation of contract funds will significantly restrict monitoring.	Monitoring and assessment of watersheds will continue dependent upon funding availability.
Track and Monitor 377	Provide summaries of water quality and land use information for each identified CCA.	RWQCB2	CCAs identified and schedule being developed.	Delays in setting up CCA and strategy.	Ongoing activities 03-08.
Track and Monitor 363	Develop and implement a strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB2	Regional Monitoring Strategy (RMS) developed.		Ongoing monitoring coordination through implementation of RMS.
Track and Monitor 378	Provide summaries of water quality and land use information for each identified CCAs.	RWQCB3	Target CCAs to be identified in conjunction with June 03 workshop.		To be implemented according to watershed CCAs Plan.
Track and Monitor 364	Develop and implement a strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB3	Lead MBNMS subcommittee on monitoring program for farm groups, information compatible with CCAMP. Sampling design almost finished. Received funding to begin monitoring.		Implement monitoring plan.
Track and Monitor 379	Provide summaries of water quality and land use information for each identified CCAs.	RWQCB4	Summary sheet for each watershed available from Watershed Management Initiative (WMI) chapter.	Additional sampling is needed	Summary updated periodically.
Track and Monitor 365	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB4	Funded various grants with monitoring components.	Long delay from selection to grant implementation	Grants still ongoing
Track and Monitor 340	Coordinate BMP effectiveness monitoring with existing monitoring programs (e.g. Mussel Watch, Toxic Substances Monitoring Program, TMDL monitoring, CALFED, USGS, DWR, MBNMS) to better assess reductions in NPS pollution	RWQCB4	Ongoing Outreach and coordination.	Monitoring funding eliminated and limited funding.	Continue to coordinate use prop 13 grants for BMP monitoring.

Track and Monitor 367	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB6	A monitoring coordinator was designated for the Lahontan Region.	Limited resources.	Continue ongoing activities.
Track and Monitor 342	Coordinate BMP effectiveness monitoring with existing monitoring programs (e.g. Mussel Watch, Toxic Substances Monitoring Program, TMDL monitoring, CALFED, USGS, DWR, MBNMS) to better assess reductions in NPS pollution	RWQCB6	Some BMP effectiveness monitoring is included in grant-funded local NPS projects which are coordinated by Regional Board staff.	Limited resources.	Continue activities.
Track and Monitor 368	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional/local ambient or project monitoring.	RWQCB7	Formal implementation of the Sediment TMDLs will not start until October 2003. Regional Board staff is conducting sediment monitoring activities pursuant to the sediment TMDLs implementation plans. The first annual sediment implementation progress report will not be available until early 2004. Thru March 31, 2003, the USEPA approved three TMDLs for Region 7. Two of the three approved TMDLs include lists of BMPs for irrigation water management.		Continue current activities.
Track and Monitor 343	Coordinate BMP effectiveness monitoring with existing monitoring programs (e.g. Mussel Watch, Toxic Substances Monitoring Program, TMDL monitoring, CALFED, USGS, DWR, MBNMS) to better assess reductions in NPS pollution.	RWQCB7	No progress.		
Track and Monitor 353	Pilot monitoring strategy in nine key watersheds statewide.	RWQCB7	No progress.		
Track and Monitor 381	Provide summaries of water quality and land use information for each identified CCAs.	RWQCB9	Not done.	Limited staff and funding.	None.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Track and Monitor 345	Coordinate BMP effectiveness monitoring with existing monitoring programs (e.g. Mussel Watch, Toxic Substances Monitoring Program, TMDL monitoring, CALFED, USGS, DWR, MBNMS) to better assess reductions in NPS pollution	RWQCB9	Not done.	Limited staff and funding.	None.
Track and Monitor 370	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	RWQCB9	Not done.	Limited staff and funding.	None.
Track and Monitor 361	Develop and implement a monitoring strategy to monitor effectiveness of BMPs in reducing NPS pollution. Design a strategy that links to regional or local ambient or project monitoring.	SWRCB	The SWRCB has begun the process of developing a monitoring strategy with SWAMP so that MM effectiveness can be ascertained. In addition, project monitoring utilizing SWAMP guidelines are being included in contract supported by federal and state bond funds.	Funding is a serious roadblock to accomplishing this strategy and implementation of it. 319 funds have been identified to support NPS monitoring via a probabilistic approach during the next 5 years.	Ongoing
Track and Monitor 356	Use DFG' s Bioassessment Protocols to assess and evaluate water quality and establish baseline water quality and trend information. Link to GIS layers.	SWRCB	Regional Boards 1, 4, 8, and 9 have been and are using DFG' s Bioassessment Protocols for baseline work. SWAMP summarized existing bioassessment programs. In Summer ' 03 the results of several side-by-side method comparisons will be evaluated by SWAMP.		Continue to encourage use of bioassessment by RWQCBs.
Track and Monitor 336	Coordinate BMP effectiveness monitoring with existing monitoring programs (e.g. Mussel Watch, Toxic Substances Monitoring Program, TMDL monitoring, CALFED, USGS, DWR, MBNMS) to better assess reductions in NPS pollution	SWRCB	No established tracking system has been developed, to date. SWRCB, DWR, DFG and CalFed are coordinating their monitoring databases through the ' Bay Delta and Tributaries Database.' This system allows data sharing.	Conflicting interests and limited resources.	Continue Current Activities.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Track and Monitor 375	Assess and report to the Legislature on the SWRCB' s current surface water quality monitoring programs for the purpose of designing a proposal for a comprehensive surface water quality monitoring program for the State (as provided for in CWC §13192).	SWRCB	A report entitled "Proposal for A Comprehensive Ambient Surface Water Quality Monitoring Program" was prepared for the Legislature and submitted November 2000.		Reporting will continue as required.
Track and Monitor 372	Populate the statewide System for Water Information Management (SWIM) with data from NPS watershed assessments and community-based monitoring.	SWRCB	Significant effort took place to develop and enable SWIM II, but the project has not been completed.	Project SWIM II was tabled for lack of funding.	Activity will continue when resources become available.
Report 1318	Report biennially to the Coastal Commission and State Board on the progress made on all actions.	BCDC	Biennial reporting has been consistent.		Continue ongoing biennial reports.
Report 387	Complete biennial reports for evaluation by USEPA and NOAA as well as other agencies and the public regarding the State' s progress in implementing the NPS Program.	CCC	A biennial report was completed and submitted to the USEPA and NOAA in late 2001. The report contained an assessment of the State' s progress in completing the major tasks listed in Table ES-1 of the Program Plan. It described roadblocks encountered and suggested ways for improvements.	The first biennial report was mostly reporting on the progress that the State made in setting up the NPS Program. It contained rather scant information regarding on-the-ground implementation of MMs.	The State needs to continue its development of an effective tracking and monitoring system. The plan is to track the implementation of programmatic efforts and MMs.
Report 389	Update CCAs list, maps and watershed information at least every two years, and report on implementation efforts and committee meetings.	CCC	The CCA Committee has just completed the identification of a CCA list and a Strategic Plan. It has taken more than two years to get this far. The next step is to establish regional CCA committees and hold meetings to select CCA pilot projects.	A complete update of the CCA list may be difficult every two years, especially given the lack of dedicated funding and staff from other participating agencies and the possibility that future updates of this list may involve many stakeholders with a variety of interests.	Statewide committee will attempt to update the CCA list in 2004 and will determine the feasibility of updating the list every two years.

Section VIII
ACTIVITY SUMMARY FOR NPS LAND USE CATEGORIES

1998 to 2003

Report 390	Provide information on CCA efforts to local, State and regional decision-makers, regional review committee, and the public.	CCC	The CCC staff have presented status reports on the CCA program to the Coastal Commission and to the Executive Officers of the SWRCB and Regional Water Quality Control Boards. During the Summer of 2003 CCC, SWRCB and RWQCBs.	Funding for plan development and implementation has not yet been identified and agency staff participation in the state or regional committees has yet to be guaranteed.	During the Summer of 2003 CCC, SWRCB and RWQCB staff will be completing a CCA communication plan, making presentations to decision makers at various venues and holding regional information exchange forums at eight locations along the California coast.
Report 391	Provide annual progress reports to Legislature/governor.	CDF	Periodic reports were made during the life of the project.		
Report 395	Provide Biennial Report to State Lands Commissioners, Cal/RA, CCC, SWRCB, and the public on CSLC staff activities pursuant to the State NPS Program.	CSLC	Preparation of staff report and the search for Commission approval to accept grant to assess CSLC lands to determine if and to what degree these lands contribute to water quality impairments. In 2002, Commission authorized Executive Officer to accept grant.	None.	Staff may report to Commission in 2004 upon completion of grant tasks.
Report 108	Inform SWRCB and CCC of progress on DHS activities related to the NPS program.	DHS	Reports are submitted as requested by SWRCB.		Continue current activities.
Report 393	Provide annual progress reports to Legislature and governor.	DOC	Reports completed annually.	None	Continue yearly reports.
Report 386	Complete biennial reports for evaluation by USEPA and NOAA as well as other agencies and the public regarding the State' s progress in implementing the NPS Program.	SWRCB	The NPS Biennial Report was prepared and completed in 2001, and was presented at two public meeting in California. The 2003 Biennial Report is under development.		Continue with biennial report preparations.
Report 385	Submit to the Legislature and make available to the public, copies of and a summary of information in all SWRCB and RWQCB reports that contain information related to NPS pollution and that the SWRCB or RWQCB are required to prepare in the previous fiscal year pursuant to CWA §303, 305(b) and 319 and CZARA §6217.	SWRCB	Copies of applicable reports and a summary of information is submitted to the legislature annually, as required. Reports then become public information, and copies are made upon request.		Continue with legislative reporting.

Report 384	Prepare and submit to the Legislature a report that proposes the implementation of a comprehensive program to monitor the quality of State coastal watersheds, bays, estuaries, and coastal waters and their Marine resources for pollutants (as provided for in CWC §13181[c]).	SWRCB	The Report was prepared and submitted to the legislature, proposing the implementation of a comprehensive program to monitor quality of State coastal watersheds, bays, estuaries, and coastal waters and their Marine resources for pollutants.	Implement the monitoring program.

APPENDIX I
NPS Program Management Measures

APPENDIX
NONPOINT SOURCE PROGRAM
MANAGEMENT MEASURE DESCRIPTIONS

1.0 AGRICULTURE

1A. Erosion and Sediment Control. MM 1A addresses NPS problems associated with soil erosion and sedimentation. Where erosion and sedimentation from agricultural lands affects coastal waters, landowners shall design and install a combination of practices to remove solids and associated pollutants in runoff during all but the larger storms. Alternatively, landowners may apply the erosion component of a Conservation Management System (CMS) as defined in the USDA Field Office Technical Guide.

1B. Facility Wastewater and Runoff from Confined Animal Facilities. Pursuant to MM 1B, facility wastewater and contaminated runoff from confined animal facilities must be contained at all times. Storage facilities should be of adequate capacity to allow for proper waste water use and should be constructed so they prevent seepage to ground water, and stored runoff and accumulated solids from the facility shall be managed through a waste use system that is consistent with MM 1C.

1C. Nutrient Management. MM 1C addresses the development and implementation of comprehensive nutrient management plans for areas where nutrient runoff is a problem affecting coastal waters. Such plans would include a crop nutrient budget; identification of the types, amounts and timing of nutrients necessary to produce a crop based on realistic crop yield expectations; identification of hazards to the site and adjacent environment; soil sampling and tests to determine crop nutrient needs; and proper calibration of nutrient equipment. When manure from confined animal facilities is to be used as a soil amendment and/or is disposed of on land, the plan shall discuss steps to assure that subsequent irrigation of that land does not leach excess nutrients to surface or ground water.

1D. Pesticide Management. Implementation of MM 1D is intended to reduce contamination of surface water and ground water from pesticides. Elements of this measure include reductions in pesticide use; evaluation of pest, crop and field factors; use of Integrated Pest Management (IPM); consideration of environmental impacts in choice of pesticides; calibration of equipment; and use of anti-backflow devices. IPM is a key component of pest control. IPM strategies include evaluating pest problems in relation to cropping history and previous pest control measures, and applying pesticides only when an economic benefit will be achieved. Pesticides should be selected based on their effectiveness to control target pests and environmental impacts such as their persistence, toxicity, and leaching potential.

1E. Grazing Management. MM 1E is intended to protect sensitive areas (including streambanks, lakes, wetlands, estuaries, and riparian zones) by reducing direct loadings of animal wastes and sediment. Upland erosion can be reduced by, among other methods: (1) maintaining the land consistent with the California Rangeland Water Quality Management Plan or Bureau of Land Management and Forest Service activity plans or (2) applying the range and pasture components of a Conservation Management System. This may include restricting livestock from sensitive areas by providing livestock stream crossings and by locating salt, shade, and alternative drinking sources away from sensitive areas.

1F. Irrigation Water Management. MM 1F promotes effective irrigation while reducing pollutant delivery to surface and ground waters. Pursuant to this measure, irrigation water would be applied uniformly based on an accurate measurement of cropwater needs and the volume of irrigation water applied, considering limitations raised by such issues as water ri concentrations, water delivery restrictions, salt control, wetland, water supply and frost/freeze temperature management. Additional precautions would apply when chemicals are applied through irrigation.

1G. Education/Outreach. The goals of MM 1G are to implement pollution prevention and education programs to reduce NPS pollutants generated from the following activities where applicable:

Activities that cause erosion and loss of sediment on agricultural land and land that is converted from other land uses to agricultural land;

Activities that cause discharge from confined animal facilities to surface waters;

Activities that cause excess delivery of nutrients and/or leaching of nutrients;

Activities that cause contamination of surface water and ground water from pesticides;

Grazing activities that cause physical disturbance to sensitive areas and the discharge of sediment, animal waste, nutrients, and chemicals to surface waters;

Irrigation activities that cause NPS pollution of surface waters.

2.0 FORESTRY

2A. Preharvest Planning. Forestry activities shall be planned to reduce potential delivery of pollutants to surface waters. Components of MM 2A address aspects of forestry operations, including: the timing, location, and design of harvesting and road construction; site preparation; identification of sensitive or high-erosion risk areas; and the potential for cumulative water quality impacts.

2B. Streamside Management Areas (SMAs). SMAs protect against soil disturbance and reduce sediment and nutrient delivery to waters from upland activities. MM 2B is intended to safeguard vegetated buffer areas along surface waters to protect the water quality of adjacent streams.

2C. Road Construction/Reconstruction. MM 2C requires that road construction/reconstruction shall be conducted so as to reduce sediment generation and delivery. This can be accomplished by following, among other means, preharvest plan layouts and designs for road systems, incorporating adequate drainage structures, properly installing stream crossings, avoiding road construction in SMAs, removing debris from streams, and stabilizing areas of disturbed soil such as road fills.

2D. Road Management. MM 2D describes how to manage roads to prevent sedimentation, minimize erosion, maintain stability, and reduce the risk that drainage structures and stream crossings will fail or become less effective. Components of this measure include inspections and maintenance actions to prevent erosion of road surfaces and to ensure the effectiveness of stream-crossing structures. The measure also addresses appropriate methods for closing roads that are no longer in use.

2E. Timber Harvesting. MM 2E addresses skid trail location and drainage, management of debris and petroleum, and proper harvesting in SMAs. Timber harvesting practices that protect water quality and soil productivity also have economic benefits by reducing the length of roads and skid trails, reducing equipment and road maintenance costs, and providing better road protection.

2F. Site Preparation and Forest Regeneration. Impacts of mechanical site preparation and regeneration operations—particularly in areas that have steep slopes or highly erodible soils or where the site is located in close proximity to a water body—can be reduced by confining runoff on site. MM 2F addresses keeping slash material out of drainageways, operating machinery on contours, timing of activities, and protecting ground cover in ephemeral drainage areas and SMAs. Careful regeneration of harvested forest lands is important in protecting water quality from disturbed soils.

2G. Fire Management. MM 2G requires that prescribed fire practices for site preparation and methods to suppress wildfires should be conducted as feasible in a manner that limits loss of soil organic matter and litter and that reduces the potential for runoff and erosion. Prescribed fires on steep slopes or adjacent to streams and that remove forest litter down to mineral soil are most likely to impact water quality.

2H. Revegetation of Disturbed Areas. MM 2H addresses the rapid revegetation of areas disturbed during timber harvesting and road construction—particularly areas within harvest units or road systems where mineral soil is exposed or agitated (e.g., road cuts, fill slopes, landing surfaces, cable corridors, or skid trails) with special priority for SMAs and steep slopes near drainage ways.

2I. Forest Chemical Management. Application of pesticides, fertilizers, and other chemicals used in forest management should not lead to surface water contamination. Pesticides must be properly mixed, transported, loaded, and applied, and their containers must be disposed of properly. Fertilizers must also be properly handled and applied since they also may be toxic depending on concentration and exposure. Components of MM 2I include applications by skilled workers according to label instructions, careful prescription of the type and amount of chemical to be applied, use of buffer areas for surface waters to prevent direct application or deposition, and spill contingency planning.

2J. Wetland Forest Management. Forested wetlands provide many beneficial water quality functions and provide habitat for aquatic life. Under MM 2J, activities in wetland forests shall be conducted to protect the aquatic functions of forested wetlands.

2K. Postharvest Evaluation. The goals of MM 2K are to incorporate postharvest monitoring, including: (a) implementation monitoring to determine if the operation was conducted according to specifications and (b) effectiveness monitoring after at least one winter period to determine if the specified operation prevented or minimized discharges.

2L. Education/Outreach. The goals of MM 2L are to implement pollution prevention and education programs to reduce NPS pollutants generated from applicable forestry activities.

3.0 URBAN

The control of urban NPS pollution requires the use of two primary strategies: (1) the prevention of pollutant loadings and (2) the treatment of unavoidable loadings. California's urban MMs are organized to parallel the land use development process in order to address the prevention and treatment of NPS pollution loadings during all phases of urbanization. This strategy relies primarily on the watershed approach, which focuses on pollution prevention and source reduction practices. Emphasizing pollution prevention and source reduction practices over treatment practices is favored because conducting education practices and incorporating pollution prevention practices into project planning and design activities are generally more effective, require less maintenance, and are more cost-effective in the long term than treatment strategies. Treatment strategies should only be used to address unavoidable loadings or where they are truly cost-effective.

3.1A-C. Runoff From Developing Areas. The major opportunities to control NPS loadings occur during the following three stages of development: (1) the siting and design phase, (2) the construction phase, and (3) the post-development phase. Before development occurs, land in a watershed is available for a number of pollution prevention and treatment options, such as setbacks, buffers, or open space requirements, as well as wet ponds or constructed urban runoff wetlands that can provide treatment of the inevitable runoff and associated pollutants. In addition, siting requirements and restrictions and other land use ordinances, which can be highly effective, are more easily implemented during this period. After development occurs, these options may no longer be practicable or cost-effective. MMs 3.1A through 3.1C address the strategies and practices that can be used during the initial phase of the urbanization process. Sound watershed management implements both structural and nonstructural measures to mitigate adverse impacts of stormwater.

3.2A-B. Runoff from Construction Sites. The control of construction-related sediment loadings is critical to maintaining water quality. The implementation of proper erosion and chemical control practices during the construction stage can significantly reduce sediment loadings to surface waters. MMs 3.2A and 3.2B address construction-related practices. These MMs are intended to be applied to construction sites that do not have an NPDES permit.

3.3A. Runoff from Existing Development

This MM is designed to develop and implement watershed management programs to reduce runoff pollutant concentrations and volumes from existing development. These programs should include; 1)identification of priority local and/or regional watershed pollutant reduction opportunities, e.g., improvements to existing urban runoff control structures; 2) schedule for implementing appropriate controls; 3) means to limit the destruction of natural conveyance systems, and 4) preservation, enhancement or establishment of buffers along surface waterbodies and their tributaries.

3.4A-B. On-site Disposal Systems (OSDS)

This MM is intended to apply to on-site treatment systems, such as community septic systems, which can cause nutrient and pathogen contamination problems to ground and suface waters if they are not functioning properly. Proper design, appropriate standards for construction, installation and maintenance are considerations for OSDS systems in order to breakdown the contaminants, apply effective treatment, and protect water quality.

3.5A-F.Transportation Development (Roads, Highways, and Bridges)

This MM is intended to apply to existing, resurfaced, restored and rehabilitated roads, highways and bridges that contribute to adverse effects in surface waters. Poorly designed or maintained roads and bridges can generate significant erosion and pollution loads containing heavy metals, hydrocarbons, sediment, and debris that run off into and threaten the quality of surface waters and their tributaries.

3.6A. Pollution Prevention/Education: General Sources After development has occurred, lack of available land severely limits the implementation of cost-effective treatment options. MM 3.6A focuses on improving controls for existing surface water runoff through pollution prevention education to mitigate NPSs of pollution generated from on-going domestic, industrial and commercial activities. Education programs in an urban environment are key to maintenance of effective urban runoff pollution prevention.

4.0 MARINAS AND RECREATIONAL BOATING

4.1. Assessment, Siting, And Design Management Measures:

4.A. Water Quality Assessment. Consider impacts to water quality in siting and designing new and expanding marinas.

4.1B. Marina Flushing. Site and design marinas to provide for maximum flushing and circulation of surface waters, which can reduce the potential for water stagnation, maintain biological productivity, and reduce the potential for toxic accumulation in bottom sediment.

4.1C. Habitat Assessment. Site and design marinas to protect against adverse impacts on fish and shellfish, aquatic vegetation, and important locally, State, or federally designated habitat areas.

4.1D. Shoreline Stabilization. Stabilize shorelines where shoreline erosion is a pollution problem.

4.1E. Storm Water Runoff. Implement runoff control strategies to remove at least 80 percent of suspended solids from storm water runoff coming from boat maintenance areas (some boatyards may conform to this provision through NPDES permits).

4.1F. Fueling Station Design. Locate and design fueling stations to contain accidental fuel spills in a limited area; and provide fuel containment equipment and spill contingency plans to ensure quick spill response.

4.1G. Sewage Facilities. Install pump out, pump station, and restroom facilities at existing and new and expanding marinas where needed to prevent sewage discharges directly to State waters.

4.1H. Waste Management Facilities. Install facilities at new and expanding marinas where needed for the proper recycling or disposal of solid wastes (e.g., oil filters, lead acid batteries, used absorbent pads, spent zinc anodes, and fish waste as applicable) and liquid materials (e.g., fuel, oil, solvents, antifreeze, and paints).

4.2. Operation And Maintenance Management Measures:

4.2A. Solid Waste Control. Properly dispose of solid wastes produced by the operation, cleaning, maintenance, and repair of boats to limit entry of these wastes to surface waters.

4.2B. Fish Waste Control. Promote sound fish waste management where fish waste is an NPS problem through a combination of fish cleaning restrictions, education, and proper disposal.

4.2C. Liquid Material Control. Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials commonly used in boat maintenance; and encourage recycling of these materials.

4.2D. Petroleum Control. Reduce the amount of fuel and oil that leaks from fuel tanks and tank air vents during the refueling and operation of boats.

4.2E. Boat Cleaning and Maintenance. Minimize the use of potentially harmful hull cleaners and bottom paints and prohibit discharges of these substances to State waters.

4.2F. Maintenance of Sewage Facilities. Maintain pumpout facilities in operational condition and encourage their use so as to prevent and control untreated sewage discharges to surface waters.

4.2G. Boat Operation. Prevent turbidity and physical destruction of shallow-water habitat resulting from boat wakes and prop wash.

4.3. Education and Outreach Management Measures:

4.3A. Public Education. Institute public education, outreach, and training programs to prevent and control improper disposal of pollutants into State waters.

5.0. HYDROMODIFICATION

5.1A-B. Channelization/Channel Modification. California's MMs for channelization and channel modification promote the evaluation of channelization and channel modification projects. Channels should be evaluated as a part of the watershed planning and design processes, including watershed changes from new development in urban areas, agricultural drainage, or forest clearing. The purpose of the evaluation is to determine whether resulting NPS changes to surface water quality or instream and riparian habitat can be expected and whether these changes will have a detrimental (or negative) impact. Existing channelization and channel modification projects can be evaluated to determine the NPS impacts and benefits associated with the projects. Modifications to existing projects, including operation and maintenance or management, can also be evaluated to determine the possibility of improving some or all of the impacts without changing the existing benefits or creating additional problems. In both new and existing channelization and channel modification projects, evaluation of benefits and/or problems will be site specific.

5.2A-C. Dams. The second category of MMs addresses NPS pollution associated with dams. Dams are defined as constructed impoundments that are either: (1) 25 feet or more in height *and* greater than 15 acre-feet in capacity or (2) six feet or more in height *and* greater than 50 acre-feet in capacity. MMs 5.2A and 5.2B address two problems associated with dam construction: (1) increases in sediment delivery downstream resulting from construction and operation activities and (2) spillage of chemicals and other pollutants to the waterway during construction and operation. MM 5.2C addresses the impacts of reservoir releases on the quality of surface waters and instream and riparian habitat downstream.

6.0 WETLANDS, RIPARIAN AREAS AND VEGETATED TREATMENT SYSTEMS

6A. Protection of Wetlands/Riparian Areas. Implementation of MM 6A is intended to protect the existing water quality improvement functions of wetlands and riparian areas as a component of NPS Programs.

6B. Restoration of Wetlands/Riparian Areas. Restoration of wetlands and riparian areas (MM 6B) refers to the recovery of a range of functions that existed previously by reestablishing hydrology, vegetation, and structure characteristics. Damaged or destroyed wetland and riparian areas should be restored where restoration of such systems will significantly abate polluted runoff.

6C. Vegetated Treatment Systems. MM 6C promotes the installation of vegetated treatment systems (e.g., artificial or constructed wetlands) in areas where these systems will serve a polluted runoff-abatement function. Vegetated filter strips and engineered wetlands remove sediment and other pollutants from runoff and wastewater and prevent pollutants from entering adjacent water bodies. Removal typically occurs through filtration, deposition, infiltration, absorption, adsorption, decomposition, and volatilization.

6D. Education/Outreach. MM 6D promotes the establishment of programs to develop and disseminate scientific information on wetlands and riparian areas and to develop greater public and agency staff understanding of natural hydrologic systems—including their functions and values, how they are lost, and the choices associated with their protection and restoration.